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THE REPUBLICS OF CENTRAL AND SOUTH AMERICA

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THE PLAZA, QUITO

THE REPUBLICS OF CENTRAL AND SOUTH AMERICA

THEIR RESOURCES, INDUSTRIES, SOCIOLOGY AND FUTURE

BY

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"The Andes and the Amazon," "Mexico,"
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WITH SIXTEEN ILLUSTRATIONS AND NINE MAPS

SECOND AND REVISED EDITION

LONDON: J. M. DENT & SONS, LTD.
NEW YORK: CHARLES SCRIBNER'S SONS. 1922.

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First Published . 1913
Revised Edition . 1922

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PRINTED IN GREAT BRITAIN

PREFACE

The purpose of this book is to provide, within the compass of a single volume, a succinct study of the Latin American republics, and their social and physical conditions; which, whilst affording exact, and, to a considerable extent, detailed information, is at the same time of interest to the general reader. There are many books of travel and description dealing with these lands, but none perhaps affording a review such as is aimed at in the present work. Furthermore, the sociology of the Latin American communities, which is dealt with here, has been much neglected, and is little understood by the general reader. The most important science at the present time, perhaps, is that still undeveloped one which may be termed "human geography": the economic relation of the people of a land to their environment, and of their rights as concern the natural resources around them. It is this science, the author ventures to affirm, which will determine the future equilibrium of society. The advantages which the Latin American countries offer to the trading, investing, and emigrating peoples of the world are set forth side by side with this element, together with their various attractions and peculiar interests in other fields.

London, 1913.

INTRODUCTION TO THE SECOND EDITION

Since the publication of the first edition of the present work, there has been comparatively little change in the general circumstances of the Latin American republics. Political and social development is slow in such communities, notwithstanding frequent—and often violent—change of government, whilst trade activities (often erroneously held to be synonymous with economic growth) have fluctuated in sympathy with general world-conditions. In the Great War the majority of the Latin American States showed their sympathy with the Allied cause, both realising its justice and displaying their worldly wisdom. Some, however, remained neutral, and there were not wanting certain adverse elements. The populations of these lands increase slowly, except as regards those few into which European immigration is more marked. With regard to the needful uplifting of the great poor and illiterate bulk of folk, which involves all but a relatively small proportion of the inhabitants of the Central and South American republics, with Mexico, it cannot be said that their rulers have in general awakened to the fact that this is the main problem of government. There is, however, some improving tendency as regards education and the status of the manual worker; but, on the other hand, industrial unrest and the growth of revolutionary socialistic doctrine more than keep pace, as is inevitable, with this growth. In the field of manufacturing industry home manufacture as against importation shows some increase, but the foreign merchant may nevertheless draw some satisfaction from the increased demand by a growing wealthy native class for articles of foreign luxury. The Latin American States cannot expect to become great by reason of commercial resources, as fully discussed in this book; but so far those elements which may make for a truer civilisation in this part of the world emerge but slowly. However, the general conditions, physical and commercial, of these little-understood nations are full of interest, and especially so to the British and North American people; a fact which is borne out by the constant demand for books dealing therewith in England and the United States.

THE AUTHOR.

FROXFIELD, HANTS, ENGLAND, 1922.

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The Republics of Central and South America

CHAPTER I

GENERAL PHYSICAL AND SOCIAL CONDITIONS

Under the broad designation of Latin America, falling into a natural group by reason of their social and physical conditions, are included the independent states of the New World originally colonised by Spain and Portugal. These political divisions of the western hemisphere cover the whole area of the American continents south of the United States, embracing Central and South America and Mexico, occupying the greater half of the land area of the New World, and embodying some of its richest and most diversified, as well as most sterile regions. Bound together as they are by common ties of race, language, and character, these important states may be regarded as forming a natural, although not a political federation, with a strong, distinctive civilisation, opposed to, although not necessarily clashing with, that of their Anglo-American neighbours in the north.

The economic and social development of the eighteen independent republics of the continent and sub-continent, upon which Spain and Portugal so indelibly impressed their languages and social systems, is becoming of increasing interest and importance to the world. Whilst still in great measure an unknown quantity, with their problems unsolved, the Latin American states are beginning to play their part in the community of nations, and to contribute towards the general plan of world development. By those nations who are constrained to look beyond their own shores as concerns

matters of markets, food supply, and the provision or settlement of what they regard as their surplus population, the southern republics of America are beheld with increasing solicitude. To the student of the sociological problems which are pressing upon the whole of society with greater insistence day by day, the march of self-governing democracy as represented by Latin America—an offshoot of Europe upon a new soil, with local problems of race, topography, and environment distinct from those of the Old World—presents conditions and comparisons of growing interest and value.

The world of Latin America has always possessed attraction for the man of British race; and to the European generally, and to the American of the United States, it is becoming of increasing interest. Mexico, Brazil, Peru, Argentina, Chile are names stamped with an individuality and colour which the more prosaic and solid people of Anglo-America do not possess. Their varied and romantic lands, their people, picturesque and quixotic, with their own peculiar virtues and defects, and their pleasing language and general environment, hold an attraction which time does not dispel. For the early Conquistadores there lay behind every promontory an unknown empire, and every valley and forest concealed some Eldorado: there were mines of untold wealth, the hidden treasures of the Inca, the pyramids of the Aztec, the mystery and allurement of the unknown: and if the impulse of those days of ocean chivalry and conquest is gone, allurement remains, for Plate Ships have been replaced by dividends, and an increasing stream of gold, won through commerce, flows from Latin America to Britain, France, Germany, Italy, and the United States.

To name the varied products of those vast regions is alone to disclose the romance of exports and trafficking. The mere names of articles enumerated on consular invoices or bills of lading open an arresting vista of strange tropic and subtropic lands, of plains and forests, of shimmering deserts and snowy mountains, of precipitous mule-roads and staggering pack-trains, of irrigated plantations and sandalled peons,

of superstitious miners delving in their rocky galleries for precious ores, of the gold-laced customs officer, with his brief authority, constant cigarette, and courteous Iberian chatter, of the wave-beaten steamer, and the blue horizon, less blue only than the tropic sky: incidents and environments such, of the varied lands of Latin America. The merchant and his markets, the engineer and his works, the explorer and his unmapped forests and rivers, the archæologist and his ruins, the emigrant and his lands, the financier and his gains, and the company-promoter and his projects are all part of the picture. There is gold, silver and pearls, cotton and nitrate, sugar and cinnabar, spices and rubber, rich woods and healing herbs, copper and coal, corn, wine, olives and luscious fruits, sheep and cattle, and all else that modern life and commerce seek, in those meridional lands of the western hemisphere, to be had by the enterprising and adventurous; lands among the richest and least developed provinces of the globe, now called upon to yield up their resources to the exigent demand of this century. The foreign trade of Latin America has reached an annual value of nearly £500,000,000, of which a quarter is accounted for by Great Britain.

It is not, however, only to the profit-seeking merchant or the curious traveller that Latin America is here to be displayed. The measure of humanity and progress is not alone one of imports, exports, and investments. To look upon the Latin American communities, often weak and backward as they are, solely as fields to be exploited for the benefit of foreign shareholders and capitalists, or as means to fill the larders of the teeming factory workers of another continent, and to furnish markets for their exports, would be to contemplate another form of exploitation only less selfish than that which earlier filled the coffers of the moribund empires of Spain and Portugal. To the people of a land first belong its benefits and resources, and this fact commerce has yet duly to consider, especially as regards the Latin American communities. At the present time Great Britain has, invested in Latin America, in railways, mines, plantations, and stocks and bonds, the colossal sum of £940,000,000

sterling, yielding dividends of 5 to 30 per cent.; and France, Germany, and the United States other great sums: a vast system of absentee capitalism, carrying with it grave duties and responsibilities.

The importance of Latin America as regards the extent of its territory can readily be grasped in outline. It occupies, as stated, more than half the total area of the American continents, covering more than 8,000,000 square miles of land. The greatest length of territory upon which Spanish is spoken, measured upon the relatively uniform line of the Pacific coast, is 7,000 miles, extending from the boundary of the United States with Mexico, southwardly to Chile. The largest Latin American state, that of Brazil, is greater in size than the United States or Canada, larger than Europe without Russia; and the area of the smallest republic of South America, Uruguay, greatly exceeds that of England. The total population of Latin America is calculated as about 82,000,000, an average of about ten persons to the square mile, as against 130 for Europe, with enormous areas of only two to the square mile. The population of South America is approximately 59,000,000, somewhat more than that of the United Kingdom alone.

Thus it is that at the present time the outstanding feature of the Latin American republics is the vast extent of territory controlled in proportion to the small number of the population. Brazil covers an area of more than 3,218,000 square miles, with over 25,000,000 inhabitants. Argentina nearly 1,136,000 square miles, with about 8,000,000 inhabitants. Mexico 767,000 square miles, with about 17,000,000 inhabitants; Peru and Bolivia have more than 700,000, and Venezuela, Colombia, and Chile are only of somewhat lesser proportions, with populations varying from 3,000,000 to 5,000,000. The areas generally assigned to these states are in some cases approximate, as are the figures for populations, which are based on estimates and more or less doubtful census returns—conditions due to difficulties arising from remoteness and unsurveyed or unsettled boundaries, together with the reluctance which the people sometimes display towards enumeration, brought about

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largely by fear of taxation and enforced military service.

The problems of life and economic development in Latin America differ widely from those which fall within the experience of European nations. Great variations of topography and climate characterise this southern half of the New World, such as are unknown in the thickly-settled countries of the Old World, or even to the people of the United States and Canada. Vast regions of forests, plains, and mountains, in some cases forming savage territory, almost unexplored, occupy areas as large as that of several European countries combined, separating the centres of Latin American civilisation from each other. In the western states of South America are important communities whose daily life is carried on in an environment at elevations approaching that of the summit of Mont Blanc, and many of the capital cities of Latin America are at altitudes of 7,000 to 10,000 feet or more above sea level. The people who form these communities are of a composition found only in Latin America, where a sprinkling of a white race is slowly absorbing, or rather blending with an indigenous brown race of Indians, forming the basis of a strong and virile people in whose hands lies the shaping of a new democracy. The massive continent of South America, like the massive part of North America, may be regarded as a vast entity with a common social system, which extends to Central America and Mexico, the whole of Latin America forming perhaps the most homogeneous unit in the world, one which, moreover, is bringing to being a civilisation which, in its sphere, may be not less important in the future than that of Anglo-America.

The greater part of the area of Latin America lies within the tropics, but throughout very extensive regions the effect of latitude is negatived by that of altitude, the high elevations above sea level serving to offset the heat of the torrid zones. Upland districts the size of France and Germany lie within the tropics, with a cool and healthy climate, productive of the resources of the temperate zone and free from diseases often erroneously considered inseparable from the

tropical regions, and producing a hardy and intelligent race. This condition of high elevation is one which must profoundly affect the future of the Latin American countries and people: scarcely any of these states is without its healthy highlands and bracing upland atmosphere. The great differences of elevation, which account for the variations of climate such as correspond practically to differences of latitude, render many of the Latin American countries complete entities as regards their food products and other resources. Thus, the lowlands produce foods of the warm climate, such as maize, coffee, sugar, and tropical fruits, and the highlands foods of the temperate climate, such as wheat, potatoes, and cattle. Taken in conjunction with their widely distributed mineral deposits, it is seen that many of these nations possess within their own borders everything necessary for the life of a modern community, whether of food, whether of raw material for manufacture, or whether of currency, without asking anything from the world outside. Economically they might lead independent existences, for, from this point of view, nature has provided them with complete sets of things requisite for human life, without going beyond their own borders. The formation of such countries as Mexico and the Central American states, and Colombia, Venezuela, Peru, Ecuador, and Bolivia might be regarded as that of vast truncated pyramids, their bases set in the tropics, their middles in temperate, and their summits in cold lands, upon whose slopes nature had provided of purposeful intent zones wherein the natural products of all climates might flourish: huge natural gardens one above the other. Nowhere in Europe do such conditions exist; and it may be that in the future and more intensive development of the world much will be made of this natural horticultural system. The dweller in such lands, by going up or down the valleys of his country, can make his choice of climatic environment, and reap sugar, coffee, or wheat from the national resources.

The Latin American peoples are commonly subject abroad to certain misconceptions concerning their racial composition. They are regarded on the one hand as Spaniards or

Portuguese, or on the other as merely half-breeds. Neither of these descriptions is correct; the great mixed race of European and Indian blood, the mestizos, which now forms the bulk of the Latin American nations, is too far removed from the original stocks to be specially identified by either. They are not correctly described as half-breed people, but have become a self-contained type, notwithstanding that the term mestizo, or mixed race, is taken as designating the predominating class, which is neither white nor Indian, but is formed of both. In Latin America the admixture of white and coloured races has gone on unhindered, the reverse of what has taken place in Anglo-America, where the Indian has practically disappeared. In this process the less moral character of the Spaniard and Portuguese was the equivalent of a useful adaptability. Arriving in the New World without their women the men of the Latin race from the Iberian peninsular consorted freely with the native women, and a mixed race began to spring up at once. The temperament and habits thus introduced continue to the present time. The Latin American, of whatever condition, is far less controlled in sexual matters than the Anglo-American, and statistics shew that a very large percentage of births in the Latin American republics are illegitimate. Little stress or censure is laid on this condition in countries the bulk of whose population is ignorant, and the female element unprotesting, and whose main requirement is an increase of population at all hazards.

With the stock thus formed other races are mingling in increased degree, due to immigration, especially that of Italians, who have modified the composition of the people of Argentina greatly. British, Germans, French, Arabs, Slavs, Austrians, and a sprinkling of all nationalities are encountered in smaller degree; and even in remote villages there is an inevitable contingent of foreigners, as a rule. The negro element is that resulting from slave times, and is especially strong in Brazil, where a new race may be said to be coming to being, formed by the union of the Portuguese, the Indian, and the negro. There are blacks also in Colombia, Venezuela, and on the coast of Ecuador, and in

Peru, where they were introduced as slaves; and these African people have left their mark on the population in some instances. The Asiatics are principally represented by the Chinese, who were originally introduced as slaves, or as indentured labour, on the sugar plantations of the Pacific coast; and by the Japanese, who now enter as free immigrants, and whose advent is encouraged by the Peruvian and Brazilian governments. In Mexico and Central America somewhat similar conditions obtain as regards Asiatics, and there is a small admixture of Anglo-Saxon blood from the United States in the regions close upon the northern railways, and in Chile and various other places. There is no comparison or affinity between the indigenous races and the African negro race, which is far inferior.

Thus the distinguishing types of people inhabiting Latin America are the whites, more or less pure; the mestizos, formed by the union of white and aboriginal; and the pure Indian; then follow the mulatto, formed by the union of white and black; and the zambo, from the union of Indian and black; and lastly the small fusions of the miscellaneous peoples. The first three are those of national importance, but it is to the mestizo that the future of Latin America belongs; and it is this class which constitutes the Mexican, Brazilian, Peruvian, Chilean, or other specially designated people of the New World.

The people of Mexico and Peru especially, have little to be ashamed of as regards their Indian ancestry. The early inhabitants of those lands had evolved or inherited a social organisation and culture, in the Inca and Aztec empires, which ensured the admiration, although not the toleration, of their Spanish conquerors; and even to-day the history and remains of this culture are subjects of interest to the archæologist. The Indian races of Mexico and Peru produced heroic figures in the history of their countries, both before and since their indigenous civilisations were absorbed or destroyed, among whom, in the latter period, and more especially in Mexico, were statesmen and lawyers who have markedly influenced the destiny of their nations. Their Indian ancestry is generally stamped upon the

physiognomy and cuticle of most of the governing class of Latin Americans to-day. It is commonly asserted that the mixed race of Latin America has inherited the vices of both its ancestors, but this must be regarded as a harsh characterisation. It should rather be considered as an evolving race, full of life, with the extravagances of a people in the making. It is in their hands that the development of half the western hemisphere lies, for the absorption of the white or direct Iberian-descended upper class is but a question of time, as is that of the pure Indians. Notwithstanding that there is no "colour line" in Latin America, in the North American sense, there is naturally a pride in white descent, and an inevitable tendency to look down upon the pure Indian race. The Criollas, or Creoles, as the white people were originally termed, always regarded themselves as the superior element, and this trait dies slowly. Race-nostalgia, the regard of the descendant of the white colonist for the land and traditions of his forefathers, preserves itself for generations; and to a share in this sentiment perhaps, is due the fact that the mestizo is harsher in his conduct towards the Indian than is the man of pure white race.

The relative proportions of the white, the mixed or mestizo, and the Indian peoples of Latin America cannot be set down with any exactitude. They are not sharply defined, even the whites, who largely monopolise the ruling professions and administrative positions, being inextricably mixed with some shade of aboriginal blood in most cases; whilst, naturally, the line between the mestizo and the Indian shades away unequally. Nevertheless, the proportions of each may be estimated broadly. In Brazil, whilst the figures are extremely unreliable as to persons of colour, it may be assumed that of the 25,000,000 inhabitants 40 per cent. are whites, 30 per cent. are mestizos, 20 per cent. are of negro blood, and the remainder Indians. In Mexico, the next largest in point of population, the people of pure white descent probably number about 15 per cent. of the population, the mestizos 50 per cent., and the Indians 35 per cent. In Argentina, whilst the Indian

has made an important contribution to the population, both this and the neighbouring republic of Uruguay are white to a greater extent than any other South American state, due to recent European immigration in large part. Black, white, and red or brown are, however, all component and visible parts of the Argentine population in certain districts. On the western side of the continent the mestizo tends to predominate and rule, and the Indian forms the greater proportion of the inhabitants, especially in Bolivia, Peru, and Ecuador. In Chile the Indians are a vanishing race ; and indeed in all the countries of the Andean region the aboriginal race tends to diminish rather than to increase, due to the abased and poverty-stricken condition of their life, to the inroads of disease added to the rigours of the climate, and, in some regions, the effect of forced labour. In Peru about 60 per cent. of the population are pure Indians, about 30 per cent. mestizos ; the whites of pure descent being perhaps 10 per cent. or less of the total. Bolivia, Ecuador, and Colombia have also a large predominating Indian population, with a small white and mestizo governing class ; and in Venezuela similar conditions obtain, with a somewhat more numerous negro element near the seaports. In Chile the white class rules, and there is a small admixture of Europeans of recent times, among which English names appear, although borne by Chileans. The Central American republics are equally mixed ethnologically, with white, brown, and African races in varying proportions. Calculations generally given for the proportion of people of pure white descent in Latin American society are in actuality too large, and must be regarded as the expression of an ideal rather than of a fact.

The character of the ruling classes of the Latin American people, formed by the whites and better class mestizos must, taken as a whole, be regarded as a complex one, with pronounced virtues and defects. There is no other race answering exactly to their characteristics. They are a people full of imagination, creatures of impulse, moved by sentiment and easily stirred to love or hate, both of which extremes are generally short lived. Their ideals are high, but in practice

they easily descend to tortuous methods, and the opportunist side of their character is much in evidence. The rights of man, of "liberty and equality," phrases enthusiastically borrowed from their French social model, are words of every-day utterance, but political and class oppression, and, in times of stress, vengeance and assassination, are common incidents of republican life. Charming in their hospitality and urbane courtesy, and in all things that pertain to the social world of polite amenity, they lack the stricter regard for word and bond in political and commercial matters of the Anglo-Saxon people, and by sheer force of words at times think to turn chicanery into truth. Law, order, and progress are terms greatly promulgated on every occasion which gives opportunity for the impassioned eloquence for which the Latin American is justly famous, and are matters which, theoretically, he has at heart; but in practice they too often tend to become empty catchwords, flung to the public by enthusiastic orators or office-seeking politicians. The advent of each new president or dictator is generally hailed as a "new era," in terms of semi-delirious exuberance, but the words have scarcely died away before the old order of self-seeking and political corruption settles around the life of the community again. The Latin Americans are a people of sudden changes. An urbane senate, steeped in high-sounding phrases and proposals for well meant legislation, controlled by a distinguished president and dignified cabinet ministers, gives place, by a seemingly inexplicable turn of affairs, to a clatter of mule-batteries on the pavement and a shower of rifle bullets, followed by vengeance, bloodshed, and imprisonment, with the dead lying in the plaza among the palms and fountains, and the lamentations of their women. Under a smooth urbane exterior the Latin American conceals certain feline qualities, capable of perpetrating cruelties such as it might have been supposed would be impossible in view of the very considerable pretension to civilisation to which the Latin American republics lay claim. Human life is held cheap, a condition inherited partly from the bloody religious practices of the Aztecs before the Conquest and constant internecine conflict, and

partly from the Spaniard. Secret torture in prisons, whether for personal vengeance or whether for the purposes of inducing confession by criminals, is common. The excesses in times of revolution, and the political murders which take place with such frequency in South and Central America and Mexico are some of the most terrible features of misgovernment. The constant plunging of the communities into civil war, and the sacrificing of the working population as " food for powder," constantly works ruin upon the industries and development of the Latin American republics. The history of these countries, since the time of independence, is made up of such struggles.

The complex character of the Latin American people is partly explained by the variety of races embodied in the Spaniard, in whose veins flows the blood of Celts, Goths Moors, Romans, Semites, Vandals, and others, which he has mingled with that of the American Indian. But the Spanish origin does not alone explain the latent feline character. There are certain well-marked " Oriental " traits about the Latin American. The blood-guiltiness of the Asiatic, the wiles of the Oriental generally, with his suavity and seeming benevolence in repose, and the cruelty and heartlessness, as of the Russian and the Tartar, seem to influence or break out at times in the character of the Mexican, Peruvian, Brazilian, Chilean and other Latin Americans, as if they owed something in their composition to Oriental stock. If the theory be true that America in prehistoric times was peopled by Tartars or Mongolians, and other Asiatic races, such qualities may have been transmitted in that way. Both in their physiognomies and their mental characteristics the Latin American people, as regards the mestizos and the Indians, exhibit Oriental traits ; and it might almost be said of them, as it was of the Russian, that to *scratch* a Latin American is to disclose a Tartar !

The better and normal side of the Latin American character reveals sound qualities which call for full recognition. There are certain elements in Latin American civilisation which are superior to those of Anglo-America, as represented by the United States and Canada, and which may be of

great value in moulding the future of the American democracies. The strong ideals of art and oratory, and the pride of refinement and courtesy which are displayed, together with the refusal to be dominated by the too commercialistic spirit such as influences their northern neighbours, mark out the meridional inhabitants of the New World as a more imaginative and less material-minded people. To be a *caballero*, a gentleman, at least in outward form, is a racial ideal. From the highest to the lowest, courtesy is a native characteristic, indicative of a neighbourly quality, and in general demeanour there is a stronger sense of respect for the individual than in such communities, for example, as the United States. In Mexico or Peru the poorest peon is a gentleman in his deportment towards others, and towards things which merit reverence. The crimes due to political differences which, in Latin America, break out into bloodshed, are not, in a sense, worse than the crimes of the modern highwayman, the train-wrecker, and the bank-robber, as well as the terrible vendettas, of the United States. The Latin American people lack the stable self-governing qualities of the Anglo-Americans, whilst the latter are wanting in the idealistic qualities of their southern neighbours; but each has something the other lacks, some necessary element of social life, and both races can, with advantage, learn and borrow much from each other.

The women of Latin America are far less advanced in social freedom than their northern sisters. They have scarcely begun to emerge from the rigid seclusion of the home, which the imported customs of Spain inculcated. Their emancipation is hampered by the general attitude of their male kind towards them, which must be modified if progress is to be attained. The position of woman in Latin America is a difficult one. Her seclusion partakes of feudal times, and is almost Moorish or Oriental in character. She rarely appears in public without escort, and, stated brutally, it may be said that the Latin American woman is only just learning that she may venture out alone without fear of violation—an attitude not unwarrantable in view of the history and character of the Spanish-speaking people. The

relations between the sexes partake in large degree of the romantic and the licentious, as far as the younger element of society is concerned ; and the frank intercourse and comradeship between them, as among northern nations, is unknown. This is partly a result of national temperament, and partly the inheritance of the Spaniard, who in earlier times gave free rein to his passions among the native women, and whose sense of delicacy and chivalry where woman is concerned, although of greater pretension, is in reality far less developed than that of the man of northern Europe. The Latin American woman is not licentious by nature, but her affections are strong. After marriage the love of home is a marked feature of her disposition, and the care of her children the principal object of her life. She is generally of an attractive type, physically, and often so mentally ; vigorous and prolific ; and no race can fail whose mothers and wives have the attributes of the women of Spanish and Portuguese America. Whether among the upper classes or whether among the poor and unlettered, it is noteworthy that the vulgar type of woman is not produced by the Latin American civilisation to the same extent as among the Anglo-Saxon or Anglo-American people. The upper class are refined and distinguished in speech and bearing, and the lower respectful and modest. The young lady of the upper class of Latin American society has earned a deserved reputation for her attractive appearance and for her vivacity and intelligence. The dark, expressive eyes and wealth of hair are inherited both from her Spanish and aboriginal ancestry. A figure slender and well formed tends, after middle age, to stoutness, a result partly of the Indian race in her composition, but largely to the lack of outdoor exercise and attention to other hygienic matters. More enlightened conditions of life in this respect would ensure for her the same improvement physically that has been attained by the British or North American girl. The romantic and pleasing appearance of the Spanish American maiden has for its background the quaint architecture of those southern lands ; and the mild climate and marked social distinctions invest daily life with more of a peaceful

or languorous atmosphere than obtains among the industrial nations. The intermarriage of British and other Europeans, and of Americans from the United States with Latin American women, is an increasing condition resulting from growing intercourse due to the advance of commerce and colonisation. The condition leaves little to be desired, and is likely to increase.

A notable condition of Latin American family life, which may prove of much importance in the future, is the absence of neo-Malthusian ideas, or the practice of "race suicide." The Latin American mother has not learned to limit the number of her family. When her own romance of courtship and marriage is over she regards herself as a medium for the advancement of a more or less numerous progeny, and has no hesitation in sacrificing her own amenities to the welfare of the coming generation, as represented by her own children. She has indeed been reproached at times with retiring too much into obscurity as the new generation comes forward, and in failing to resist, as has been more or less successfully done by her European and North American sisters, the effects of advancing middle age. The refusal to practise the limitation of child-bearing is the result largely of the influence of the Roman Catholic religion, which retains a strong hold of the sex in those lands. This characteristic of family life, if continued, must in the future have a marked effect on the growth of the population; and the seclusion and deportment amid which it flourishes are not likely yet to be too rudely disturbed.

On the other hand, a too rigid seclusion of the sex will retard social progress. At the present time woman in the Latin American communities takes little part in civic, commercial, or scientific life. In those instances where she does engage in such, she evinces a strong capacity for protecting her own or her husband's interests. Probably the emancipation of woman in Latin America might bring about a more rapid trend of social and economic progress in what is, so far, an entirely man-controlled regimen. Doubtless, as time goes on, the Latin American woman will not be content with her *rôle* of a passive agent, but will

awaken to the necessity for playing that part in rectifying the serious social disorders of life which is now being entered upon by her sisters of Great Britain and other nations, and from which much is to be expected.

It cannot be said that as a whole the Latin American people are of a fine type physically. There are, in the more pronounced white race, men of the good stature and features and distinguished presence which are commonly encountered in the European; but the Indian blood in the mass of the people has shortened and slightened the figure. The undersized mestizo type predominates. He is agile and quick-witted, but his countenance is not, from the European point of view, generally reflective of power or dignity. The pure Indian sometimes appears larger of stature than the mestizo. It is not to be argued that mere size is an advantage, but in the Latin American male the lesser physical stamina seems to have given rise—possibly as a measure of compensation of a sort—to an excess of "smartness." He is "vivo," as the Spanish word has it. It is notable among the Latin American race that the women are as a rule of more pleasing features than their men. Nature has been kinder to the woman of mixed white and brown race than to the man. The attitude of the mestizo towards the Indian is curious. It might have been supposed that the man of mixed race would have regarded the Indian with affection and a desire to better him. Flesh of his flesh, he should not have been prone to despise or ill-treat him. Yet the typical Brazilian, Peruvian, or Mexican is more callous towards the Indian than is the white man. Notwithstanding that, from president and cabinet minister downward, the Indian woman has been the mother of the race—for very few women from Spain entered the New World—the Indians are regarded as a *raza conquistada* or conquered race, standing apart, and have been, and still are, subject to negligence or oppression by the mestizo class. Naturally in this attitude there is something of race-jealousy—the yearning for the white skin, as before remarked.

The economic development of the Latin American countries, in comparison with their neighbours of the

United States and Canada, has been of slow growth, notwithstanding that they were in some cases strongly established at a much earlier date. In the viceregal centres of Mexico and Peru, and to a lesser degree in the outlying territories, populous cities, endowed with Royal Charters, had grown to being long before the founding of the New England colonies or the sailing of the *Mayflower*. This slow development was due both to physical and political conditions. The jealous restrictions placed by Spain and Portugal upon their colonies prevented the expansion of commerce and the opening up of the territories for several centuries. When those were removed, topographical and climatic conditions seemed to interpose serious obstacles against settlement and colonisation, added to the political unrest and the lax or arbitrary administration of law which has characterised the republican form of government of the Latin American States. The profitable exploitation of the soil could not be carried on by individual pioneers in a way such as laid the basis of North American prosperity. Natural surroundings are more stupendous in the Southern continent, and the effects of climate less easy to combat. The waggon of the pioneer could not easily have traversed the dense forests or surmounted the enormous mountain ranges of Latin America, as it did in the early days of the United States ; nor was the character of the colonising people of the resolute and plodding nature necessary to overcome such obstacles. The Spanish Conquistadores performed prodigies of valour and were among the most intrepid explorers in the world, but they were impatient of the surer, if slower, methods of development which characterised the Anglo-Saxon. They encountered a menial race which performed all manual labour for them, and, in the long run, the fabulous wealth of Mexican and Peruvian mines proved of less account than the corn-lands and the forests and iron mines of North America.

It is only of very recent years that these conditions have begun to yield to the exigencies of modern enterprise. A land already occupied by a more or less servile population did not offer a field for the independent settler, with his

homestead and log cabin. Nor did its people or their ruling class possess the mechanical genius of the Northern Americans, which, of itself, without aid from the outside, would have ensured progress. The Latin American countries have been in the somewhat unfortunate position of dependents upon foreign capital and initiative for the construction of their public works. The capitalists of their own race have generally been too niggardly and lacking in forethought to do more than absorb the values of the soil immediately around them. Methodical organisation and joint-stock enterprise were borrowed from abroad. To work for to-morrow was foreign to the Latin American character, and the dollar expended without immediate return was regarded as lost. A people which has neither the energy to build ordinary roads, nor possessed the power of evolving the railway, is doomed to pass through a phase of commercial conquest, and to suffer from the rapacity of, as well as the benefits resulting from, the operations of the foreign concessionaire. The alien railway-builder and mine owner has been the agent destined to awaken the industrial apathy of the Latin American world, and is covering the land with his works—operations which it cannot be said yield the maximum of benefit to the working people of the soil. To labour for the production of dividends for alien shareholders may be a necessity of the immediate present, but it is not a condition which will retain pre-eminence when the true spirit of industry-planning develops, such as has yet to engage the attention of all nations, but which lags grievously in Latin America.

Commonly there is considerable misapprehension concerning the native labourers of Latin America. They have often been regarded as indolent and of but little use in the development of modern industry. But experience of the native races and an unbiassed view shew that this reputation is undeserved. It is true that the Indian or the mestizo will not perform, to fixed hours of labour, the routine of work to which the European or Anglo-American is accustomed, and that this failing may make him the despair of the plantation overseer or mine manager from abroad.

But this is not necessarily or entirely a defect. Regarded in the more modern light of development it may mean an independence of spirit and a refusal to be hidebound by commercial domination. It is not that the native is incapable of work. The miner of Mexico, Peru, and Chile carries on, and has carried on for centuries, mining labour of so hard and dangerous a character as is not surpassed in any part of the world; no place has been inaccessible to him, and the result of his labours is encountered over thousands of miles of the highest and bleakest mining regions upon the globe. The agricultural labourer, the peon, the Cholo, and others born to till the soil of the New World are, in some cases, the hardest and most industrious of their calling, working, moreover, from sunrise to sunset upon a diet such as the meanest labourer of Britain or the United States would not tolerate. The peons of Mexico, the Cholos of Peru, and the labourers on Brazilian *fazendas* are veritable marvels in the performance of manual labour upon a diet of beans, maize, rice, chillies or pepper-pods, and kindred matters. Furthermore, they have a natural aversion to work in workshops, and as a class will not leave their sunlit plantations for the gloomy interior of the factory.

The natives of Mexico and South America at times perform prodigies of work in what may be described as the manner of ants; that is, by dint of numbers and patience; and in some cases this is true of the women as well as the men. Railways have been built and canals dug by hosts of Indians bearing baskets of earth, and by women carrying earth into place in their shawls. In excavating the banks of the great drainage canal for the city of Mexico a few years ago—work which was carried out by a British firm—much of the earth was removed by labourers with baskets, which method was found to give more economical results than machinery. In Bolivia the first railways were built in this way, the soil being removed by a ceaseless stream of Indians, men and women, who carried out the earth in baskets, or in their *ponchos*, and banked it up where required. Earning only thirty or forty cents a day, equal to eightpence or tenpence, these primitive labourers move large masses of

material, somewhat after the manner of the ancient Egyptians, whom they resemble in various ways. These and similar conditions exist, of course, because so large a part of the population is available by reason of its poverty, and willing to perform menial operations for an almost nominal wage. In all Spanish American cities the occupation of porterage, for example, affords a living to numbers of Indians. If it be required to remove furniture or goods from one house or shop to another, the sight may be witnessed of a long file of native porters, each bearing a separate article, in single file along the streets : pieces of crockery, chairs, books, and other matters, in an incongruous-appearing procession. The extreme care they display in handling any object is worthy of remark. An Indian never breaks anything : whether it be a piece of crockery worth a few cents, or a valuable scientific instrument, he transports it from place to place without accident. This characteristic is derived both from his native disposition and from his habitual poverty, which tends to enhance the value of any article. It is a general notion that the Indian of Latin America lacks honesty, and will pilfer wherever opportunity occurs ; but this is often erroneous : the Indian is by nature honest. Among the ancient Peruvians and Mexicans honesty was a common and natural virtue, and even the less civilised tribes generally respected each other's individual property. It is the half-breed whose ideas in this respect are light. The Indian in South America or Mexico will generally take adequate care of anything entrusted to him, or, in the absence of his master, is scrupulous as to appropriating the latter's effects.

The charge has always been preferred against the Spaniards and Portuguese that they grievously oppressed the Indians of America, and that, had it not been for cohabitation and intermarriage, their methods would have been conducive to extermination of the native races ; and the charge forms one of the most serious indictments against the greedy and heartless commercialism of Europe in Latin America, whose latest chapter was recently written in the terrible annals of the rubber industry upon the Peruvian

Amazon. In Mexico and Peru, and elsewhere under the Spanish conquerors, the natives were subjected to the slavery of the *Encomienda* system, under which they were forced to work without pay, and often under the lash, for the landholders, the Church, and the governmental authorities, driven into the mines by armed guards and even branded on the face. When their strength failed, as it did rapidly under the onerous conditions of their toil, their miserable carcases were pitched aside to make room for others. The natural contempt of the Spaniards for manual work was augmented by the *Ley de Indias* or Indian Law, enacted in Madrid, decreeing that "Gentlemen must not mix with traders and sellers of merchandise." The work the Indian was forced to perform was greater than his physical capacity allowed, especially in view of the wretched conditions of his life; and the result was destruction of the population.

The ill-treatment of the natives has by no means been a monopoly of colonial days. The ruling and propertied classes of the Latin American communities, since the Spanish and Portuguese control was cast off, have exploited the labouring classes and Indians with almost equal rigour, and in some cases with similarly cruel methods: and these have been especially marked in Mexico and Peru, the two seats of the old viceregal governments. The terrible barbarities accompanying the business of rubber-getting in Peru and Bolivia have become notorious, as have the abuses practised in Mexico upon the Yaqui Indians and upon the natives of Yucatan. The treatment of the aboriginal class by the mestizo and white classes of Latin America may well serve to shew how the terms "democracy" and "republic" may become a mere mockery, and are often little more than tyranny thinly disguised. It might have been supposed that the mestizo class, drawing more than half its being from the Indian race, would have endeavoured to uplift the Indian. Instead of this, the poor, unlettered aboriginal race has been both exploited and neglected. This is especially marked in the Andean countries, such as Peru, Bolivia, Colombia, and Ecuador. The petty authorities of the villages are mestizos, as are the officers of the dilapidated soldiery who

may be quartered in the towns, as well as the owners of the best lands and mines, and the petty shopkeepers. By all these the Indian is looked upon as a more or less stupid menial, whose work may be exploited for their benefit. The whole condition of labour throughout the Latin American countries calls urgently for reform.

The Indian, for his part, has vices which keep him backward, the greatest of which is his abuse of alcohol; and the lower class mestizo shares equally in the defect. In Mexico and the western part of South America the condition is especially marked, but the excesses brought about by the misuse of the old national drinks, the *pulque* of Mexico, made from the maguey, and the *chicha* or maize-beer of Peru, which are very largely consumed, are far less serious than those induced by the fiery alcohol, or *aguardiente*, resulting from the manufacture of sugar. The making of this crude rum is often more profitable than the sugar, and a large trade is done in the sale of the liquor to the Indians; and if the aboriginal race of Latin America dies off it will be largely due to the introduction of the white man's alcohol. Attention is constantly being drawn to the evil by zealous senators and deputies in the various congresses or Parliaments, but as the law-makers and authorities are also the large landowners and sugar manufacturers it follows that beneficial legislation is of slow growth. Disinterested effort is generally short-lived in these communities, either bribery or intimidation soon silencing the reformer, who indeed has too often raised his voice in the expectation of reaping some personal advantage.

The abuse and neglect of the Indians in Latin America is so notorious as almost to have become a commonplace, but it is a suicidal policy as concerns the peopling of a great part of the territory, for in certain regions no race could replace them. Throughout the thousands of miles of the lofty Andean uplands and mineral-bearing districts no worker, except the native Cholo or Indian, can carry on manual labour in field or mine. The conditions of rarefied air, due to elevation, render the ordinary European or Asiatic of little use: and if the aboriginal Peruvians, Bolivians,

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Ecuadorians, Colombians and others are to decrease, these lofty but valuable regions will become uninhabited deserts. Similarly will the great Amazon valley be reduced to an unpeopled wilderness if the oppression of the forest Indians continues. The destruction of the population, brought about by the ruthless forced labour systems of the Spaniards in colonial times, is being carried on in a lesser degree in South America by the heavy death rate resulting from the acute poverty and insanitary conditions of life among the Indians of the Andean uplands at the present time, aided by the abuse of alcohol, upon whose sale governments and landowners make a profit. Nothing can be more regrettable than the degradation and poverty of these descendants of the once well-ordered Inca community, whose rulers, with the governing instinct which was so remarkable a feature of the Incas, maintained a beneficial civilisation, which the modern Peruvians and other Andean people, exponents of Christianity, make little effort to imitate.

In none of the Latin American republics are there special or adequate laws for the protection of ordinary labour: except that forced labour is prohibited; and even that ordinance is often abused, and does not apply to the "savages" of the forests at all. On the plantation, or in the factory and the mine, the employer and the capitalist practically dispose of the workers, without let or hindrance, as best suits themselves. Even in such countries as Argentina and Brazil, whose enormous agricultural wealth and output depend upon the humble worker, there are no laws for the protection of agricultural labour worthy of the name, whilst peonage is the not uncommon condition. As regards the women of the lower classes in the country districts of South America or Mexico, conditions are little altered since the time when the Spaniards worked their will upon them; and the native or peon woman has little protection from those above her, except as she may personally guard her rights. The conditions of life in the *haciendas* or in the villages in this respect often shew the native woman to be more or less of a chattel to her employer or his dependents. It is not that she is immoral, but that the man of Spanish or

mestizo blood is unscrupulous, and has little notion of the honour of the women of a class below him. The Latin American youth, indeed, considers any unprotected woman a fit subject for his amours, and the condition in this respect in such cities as Buenos Ayres and other capitals is a constant reproach to Latin American civilisation. No foreign or unprotected girl could yet make her home or live independently in such communities.

The political difficulties of the Latin American nations, so much in evidence generally, and their backward sociological conditions as revealed to the traveller, cannot be ascribed to their form of government; for as far as statutes and theories are concerned these are excellent. The working of an American republic, on paper, has been highly specialised, and the Latin American constitutions are, theoretically, almost "counsels of perfection." It is in the application of theory to practice and statute to common deportment that failure in self-government has so frequently been due. The man of Spanish race makes excellent laws for the community, but often appears to reserve the right to contravene them himself: and this results from his strong individualistic character.

The constitutions and governing powers of the eighteen republics are more or less similar throughout Latin America generally. They are largely founded upon the model of the United States, with individual variations dictated by the circumstances of each nation, and the conditions under which they were drawn up. These written constitutions are subscribed with all the solemnity of a decalogue, and may not be transgressed in the most minute particular. The high purpose aimed at is set forth in impressive language, in which Divine approval is invoked, followed by a full Declaration of Rights, in which the scope of the law is very fully defined. A high ideal of justice and liberty runs throughout these documents, and an impressive ardour for righteous collective action which, were they borne out in practice, would insure for mankind a real step forward in civilisation. Apart from these matters they do not embody any new constructive principle, nor recognise specially the

duty of the community affirmatively towards the individual, such as the future will require : nor is it to be expected that they could do so, having been evolved solely from the ordinary tenets of community life of Europe and North America, which themselves are only now awakening to an advanced conception of democratic rights. These constitutions, moreover, whilst they are set down theoretically as permanent, do not follow their model of the United States in that respect, for they are at times modified, and even swept away and replaced by successive administrations. Among some of the less responsible republics the making of constitutions has been excessively frequent, and a source of occupation for revolutionary generals and lawyers.

The various republics, as regards their governing systems, may be divided into two kinds : Federal republics and Centralised republics. The first follow more closely the United States model in being a federation of states, under which the various provinces or states enjoy autonomous government or home rule, with certain limited powers reserved to the federal authority. The federal republics are : Argentina, Brazil, Mexico, and Venezuela, but the first-named has accorded a somewhat more prescribed form of home rule to its component states, the laws and judicial proceedings of one state being enforced throughout the republic, and not, as in the United States, varying for different states. The centralised republics, embodying all the remaining countries in South and Central America—Peru, Chile, Colombia, Bolivia, Uruguay, Guatemala and others—have a central system of government, and are divided for purposes of administration into departments, generally with prefects or political chiefs at their head, the office being appointed by the national executive, with a corresponding measure of autocracy.

The governing powers set forth in the constitutions generally consist in three partially independent branches of administration : the Executive, the Legislative and the Judicial, represented respectively by the president and his cabinet ; the National Congress of two chambers, or senators and deputies ; and a Supreme Tribunal. The

executive power is vested in the president, elected for a term, generally of four years, by direct vote, and a vice-president, who succeeds to the presidential chair automatically when the office suddenly becomes vacant. The president is advised and assisted by his cabinet of ministers; and his duties, in the majority of cases, include that of commanding the armed forces of the republic. The portfolios of ministers are generally designated as those of Foreign Affairs, Finance, Agriculture, Industry and Commerce, Communication and Public Works, War, and Marine. In some states there are variations and additions to the governmental departments, such as the Department of *Fomento*—the word meaning "Encouragement"—which is an important branch of the Executive, dealing with the establishment of new industries and kindred matters.

The gravest evil in Latin American government is the abuse of the electoral power. It is almost impossible under present conditions for the voice of the people to be heard impartially and authoritatively in their own government. Presidents and governors frequently strive to nominate their successors when their own legal term is run; and these, by their local influence, bring about intimidation and corruption at the ballot-boxes. It is doubtful if among the whole of the self-governing republics there is a single one wherein an honest and impartial election takes place. The principal means of protest or remedy, and that which is freely applied, is a *pronounciamiento* and revolution. Naturally this method, if successful, no more establishes the popular choice of rulers than that which brought into power the law-givers whom it has ousted by the sword. In these methods the southern republics of America differ absolutely from their model, the United States, where the president and higher officials are truly elected by popular vote and represent the choice of the majority. As suffrage depends upon literacy only a small proportion of the people can vote.

The administration of justice in Latin American communities, in general, leaves much to be desired. It is not too sweeping a statement to say that civil and criminal courts in every Latin American republic, under present

development, are corrupt and dilatory. Clean and speedy justice is a plant of slow growth; judges and witnesses are rarely without their price; and favouritism and the longest purse are too often the adjuncts of success in the courts of Latin America. This and other venal attributes appear prominently through the covering of Latin American administration, and shew how backward in this respect is their civilisation. Underlying and ingrained corruption of this nature, taken in conjunction with the great distances over which the arm of the law must reach, and the dearth, away from the towns, of inhabitants of an educated class to uphold it, render administration of justice in the remoter regions extremely difficult. These conditions do not apply only to the small and backward states, but equally to the most prominent communities, such as the Argentine republic, Brazil, or Mexico.

The constitutions of the Latin American republics generally set forth the relations of Church and State. Most of them recognise the Roman Catholic Apostolic religion as that of the nation; some proclaim that no law shall be made concerning either the establishment or the prohibition of any kind of religion; that religious worship shall be in no way established, subsidised, or embarrassed. In some states the public exercise of worship other than the Roman Catholic is absolutely prohibited, but in others, in practice, a certain amount of toleration exists. But great hostility attaches in the remote regions of certain states to any form of Protestant religious establishments or public teaching, and throughout the whole of Latin America public sympathy is against any form of Protestantism, and is easily aroused by the clerical element to display antagonism. In the smaller towns and in the villages the petty ecclesiastical authority is a person of considerable importance. But the influence of the local priest in the more remote places has been subject to grave reproach, due to extortionate treatment of the Indians, whose religious instruction and practice is degraded almost to the level of a superstition at times, and to customs of immoral living. The law of celibacy is rarely honoured in such places, but on the contrary is

violated openly, showing both its irrationality and the low standard of morality. Under present conditions, however, the Church in these remote places must be regarded as a restraining force and a check upon the petty abuses of the local authorities and traders—abuses which are so serious an evil throughout Latin America. In the state capitals and larger towns religious influence is strongly marked, and public worship and the observance of the Sabbath universal: although its influence is held to be declining, especially among the male portion of the population, who are notably falling into materialism: probably a temporary reaction from papistry. This is not the case, however, with the female element, for women are the most ardent supporters of the Romish Church and its priestly regimen—an influence which must be regarded impartially.

The Church, and church architecture, is one of the dominating features of Latin American life. The most abiding link with the old Spanish regimen is the ecclesiastical —as is the domestic—architecture. There was something essentially noble about an influence that so lavishly endowed hundreds of cities, distributed over thousands of miles of almost inaccessible territory, with beautiful cathedrals and churches and massive and enduring public buildings; which gave every village its humbler temple, and lined the squares, *alamedas*, and streets of towns with quaint and dignified façades, such as are encountered in every centre of population in Latin America. The ecclesiastical structures and general town-planning of the old Spanish colonies was not motived by any hasty commercialism or desire for ostentation, but by reverence and a sense of the beautiful, and a desire to build solidly and well. There are certain attractive possibilities about the Latin American towns, as regards their general structure and regimen. They are not manufacturing or exporting centres, but are more or less self-supporting, drawing their supplies from local resources and consuming what they produce. Such towns are scattered in thousands throughout South and Central America and Mexico, and when the social condition and educational standard of the people are upraised they will

form permanent centres of quiet civilisation superior in character to those of the manufacturing communities of other lands, where squalor and poverty are the inevitable accompaniment of commercialism. Thus, there is much in the plan and general disposition of the Latin American city which is of sociological value. The centre of the town, however small, consists in a plaza or public square, with a band-stand, which forms a promenade for the populace, and a common meeting-ground for the sexes. These plazas are generally prettily planted with shady trees and flowers, and their benches are pleasing places of sojourn from the noonday sun, where none need be ashamed to dally awhile. At evening, when the band plays, which generally takes place several times a week, a large concourse gathers there. From the plaza run the main streets, lined with dwelling-houses and shops. The four sides of the plaza are generally faced by the public buildings, the cathedral or church taking an honoured place, and the national palace or municipal building a prominent position. The *portales*, or arches which generally occupy one or more sides of the plaza, are useful and pleasing features of civic architecture, forming a covered way, both from sun and rain, for the foot-passenger. These examples of their Madrid prototype are encountered in nearly all the principal cities of Latin America, from the numerous state capitals of Mexico to those of South America. Modern construction, however, tends to eliminate this feature, and much else that is attractive, in domestic architecture.

Notwithstanding the possibilities of life in the country, the dweller in the Latin American metropolis cultivates a species of superior pride in his urban surroundings, and there is the same tendency among all except the Indian classes to desert the country for the towns such as is displayed in European countries or the United States. In the principal cities of Latin America the cost of living is high. Food, clothing, or at least as regards imported articles of provision or apparel, are dear ; and house rent, especially in such centres as Buenos Ayres, Lima, Mexico, Rio de Janeiro and others, is out of all proportion to the amount of space and

comfort obtainable. Taken as a whole, rents are far higher than in similar situations encountered in Europe. The cost of living in Latin American cities, having regard to the great unoccupied spaces and vast, unexploited national resources, is exorbitant, and life is consequently cramped. In the small towns and in the country living is, however, very cheap. But the phenomenon of high cost of living is more and more calling for remedy in the New World as in the Old.

The business quarters of the Latin American capitals display shops and warehouses which are, in some cases, almost the equal of such in Europe or the United States. If the commercial side of the people is less developed than in Europe or North America, there is no lack of activity in shopkeeping. Furthermore, there is nothing derogatory to the upper class in those communities in engaging in commerce, and even in disposing of their own goods over the counter. The learned professions do not necessarily carry any social superiority over those of trade—supposing the trader to be wealthy. Wealth is regarded with marked respect. The possession of money is the most powerful means of influence in these republican communities. Yet the national traits of courtesy between man and man cause the very marked difference in position brought about by wealth and influence to appear less acute than is the case among northern people; and the suavity of manner and formality of address on the part of their betters, to which the poorest are entitled, are deeply ingrained customs.

Life in the country districts in Latin America has little of the character of rural life in England or other European countries, where civilised man has been in close contact with the land for centuries. The economic contrast between the great landowners, the masters of the *haciendas* of Mexico and the Andean countries, or the *estancias* of Argentina and the *fazendas* of Brazil, and the humble tillers of the soil could not be more marked in the most despotic country. Upon these great estates the semi-serfs—for the system renders them practically such—live more or less on sufferance, dependent upon the autocratic requirements of their masters. There is no class corresponding to an independent peasantry

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BOTAFOGO BAY, RIO DE JANEIRO

or yeomanry. The housing of the workers is generally of the poorest possible description, and there are practically no laws protecting labour either in town or country. Yet the character of the peon, or working class generally, is such as causes him to extract what of light-heartedness is possible out of his humble estate.

Latin American society is seen at its greatest ease in the towns. As regards the upper class individual or youth of Latin America, it cannot be said that he is of a vigorous or adventurous nature such as new lands require. He is generally found in the *cafés* or plazas indulging in more or less mild dissipations, studying his own diversion largely, a creature of pavements, preferring patent-leather shoes and ample breadth of collar and cuff to the garb of the sportsman or tourist. He is much more eloquent and possesses far more *savoir faire* in social matters than the Englishman or American, who to him seems lacking in those arts which, in his view, make the *persona bien educada* and man of the world. Much of this polish is native, part superficial, and all a matter of race. As regards diversions, theatre-going, love-making and kindred matters are those which preferably occupy the Latin American young man until that age when he may become a politician ; and the enjoyment and security of a government post are frequently his goal. A very considerable number of citizens live in the employ of the government in the capital cities of Latin America. It appears far easier and more attractive to this class to make a living as a state employé than in some individual occupation involving hard work and personal enterprise. It is, however, true that in some instances young men of the upper class are turning their attention to the engineering professions, which take them away from the cities ; but these are exceptions To live in the capital is to acquire the hall-mark of civilisation and citizenship, for the educated individual of Latin American race : a sentiment largely borrowed from Paris. It might have been supposed that in lands lying vacant, and in some cases almost unknown, such as are in the possession of many of the republics, the sturdy youth would have gone forth to explore, to map, to

develop, to undergo the hardships of the wilderness as sportsmen and travellers. These matters, however, are mainly reserved for foreigners, principally British, German, or American. The fascination of the wilds does not appeal to the educated native. Thousands of miles of unexplored rivers and dense forests exist in South America and Mexico, and mountain peaks among the highest in the world form the summits of the Andean Cordillera, many of them still unascended. Archæological remains in both continents, and unsolved ethnic problems among the most interesting in the world are the property of the Spanish American race, in Mexico and Central and South America: but investigation into their little-known secrets has been almost entirely the work of foreigners. There is perhaps some excuse for the native. His views and knowledge are naturally circumscribed, due to lack of association with older communities and a paucity of ideas and aspirations, owing to the present relative isolation of Latin American centres of civilisation. Purely disinterested scientific study, moreover, appeals less to small growing communities than to older ones.

Education in the Latin American republics must be regarded, as a whole, as exceedingly backward. The upper classes, however, are very well, if sometimes superficially, educated, but the lower are generally illiterate. In Brazil and Mexico 80 per cent. of the population are unable to read and write, and the percentage of illiterates in the smaller republics is generally higher. In Argentina 50 per cent. are illiterate: in Chile 75 per cent. Naturally the difficulties throughout those countries, where the Indian population predominates, of educating this class have been great; but the duty has nevertheless been seriously neglected. Primary education is free and compulsory everywhere, but funds, buildings, and teachers are generally far from being sufficient. Among the upper class in Latin America the prevalence of the university degree has always been a well-marked feature of social life. Doctors of law, science, medicine, and divinity appear far more numerous in proportion to the population than in European countries or the United States. To become a "doctor" is the principal

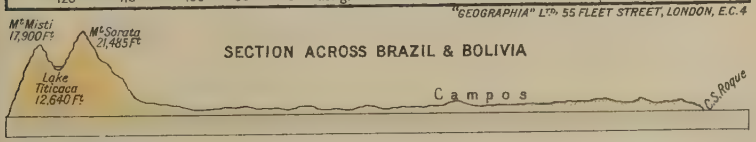
aim of the young man of well-to-do families in those communities. The desire to obtain the coveted doctorate is less for the purpose of practising the particular profession, and in becoming a useful member of society thereby, than in the pride of a more or less gilded distinction which it confers. A large percentage of those who acquire doctorates do not practise their professions; and this gives rise to a species of intellectual proletariate. In most Latin American countries a crowd, almost a plague, of young men with diplomas constantly descends from the universities upon the country, with an excess of intellectuality and a contempt often for the practical side of life, or ignorance of it, which works detrimentally in the national interests. In certain countries, such as Brazil and Chile, the title of doctor has been abolished, as being undemocratic; a circumstance not without some significance.

Some of the universities of the Latin American republics are very old, older than any in the United States. Those of Lima and the city of Mexico were established as early as 1551, and at Cordoba in Argentina the university was founded by the Jesuits in 1613. In nearly all the republics, except Uruguay, Paraguay, and Brazil, the universities go back to early colonial times. The universities of Ecuador and Guatemala are small, but in Argentina there are four universities with 7,000 students, one alone at Buenos Ayres having 5,000 students. In Chile there are 2,000 students at the state university and several hundred in the Catholic university; and in Peru, at the Lima university, nearly 1,000, with three provincial universities. Uruguay has 7,000 university students, and Brazil 8,000 pupils of the standing of university students, but without the name of such, as elsewhere described. A considerable expenditure is being made of late years in higher education in Latin America; fine buildings are being erected, and the salaries of teachers increased. In Uruguay, in the last few years, a sum equal to £400,000 has been spent, and at the university of La Plata, in Argentina, nearly £2,000,000. The majority of the professors in the universities are men who practise their profession simultaneously—lawyers, doctors,

engineers, architects, etc., also newspaper men, editors, and publishers, who come in, as it were, from the street and teach. Whilst under this system methods are not well organised, there is the advantage that professional men of good social standing are engaged therein, and accept the professorships. The universities, except those at Santiago in Chile, São Paulo in Brazil, and Bogota in Colombia, are founded by and dependent upon the state. There are many private schools in secondary education, and private societies, not religious, in the Latin American countries, as shewn in their places. The securing of a diploma in any of the Latin American universities takes from five to six years. A feature of the university system is the "League of Students' Societies"—of which three congresses have been held since 1908, with representatives from all Latin American universities. These congresses are perhaps unique, and have for their object the creation of student sympathy in America, which, it is argued, may be conducive to a general peace movement throughout the various countries.

In summing up the Latin American character and institutions full regard must be had for the comparatively recent development of the republics. They are not a slow growth of independent colonisation, like the Anglo-American people, but were, in a sense, created at a blow by their Spanish and Portuguese progenitors, and are indelibly stamped with the characteristics of those nations. To uphold and yet to modify those characteristics is at once their privilege and task. The Latin Americans are a people in the making: not an apathetic, complacent, or corrupt people living upon their past, like certain effete races of the Old World; and what of apathy and corruption they have are open to the influences of advancing civilisation.

In general terms it may be said that the vast uninhabited regions of South America cannot be more fully opened up to civilisation and economic development until railways are built to traverse them. But railway construction in such regions, due to the physical formation of the country and the climate is, in many cases, exceedingly costly. Not only have great elevations to be surmounted, but the heavy



SECTION ACROSS BRAZIL & BOLIVIA

rainfall acting upon precipitous slopes is destructive of the permanent way, and calls for heavy expense in upkeep: and costly bridges and tunnels are the necessary results of traversing mountainous regions and broken country. The economic conditions in South America differ from those which obtain in the United States and Canada, where new trans-continental railways either encountered populations already in being, or else traversed territory more immediately available for settlement by the white man. The high elevations to be crossed in North America, in reaching the Pacific slope from the Atlantic, are far less formidable than those in South America. The Canadian Pacific and the Grand Trunk railways cross their highest passes at 5,300 and 3,700 feet above sea level respectively, and the Californian and other more southern lines at somewhat greater elevations: but the South American lines which traverse the Andes, the Oroya railway and the Southern railway of Peru, reach 15,660 feet and 14,660 feet respectively; the Trans-Andean of Chile tunnels under the summit at nearly 10,400 feet; and the Quito-Guayaquil line reaches a similar altitude. Even the railways of Mexico traverse the Sierra Madre ranges at altitudes greater than those of the United States; and were it not for the isthmus of Panama and certain other low passes in Central America, there would be an unbroken mountain wall across half a hemisphere.

Where economic returns are assured in South America a network of railways tends to grow, such as has come to being in Eastern Brazil and Argentina; but throughout the whole of the great states lying on the western and northern sides of the continent the railways are scanty and of difficult operation. Until the governments of those countries are in a position to encourage railway construction, the huge regions under their control will remain practically closed to the outer world: but at present they are poor; their budgets provide little more than the means to meet their general obligations, and even in these shortage too often occurs. Thus the main problem for the economic development of Latin America is in the more

active building of railways, or the development of other means of transport and communication. Whether air transport will render any assistance in the inaccessible mountain regions remains to be seen. Roads are expensive or neglected. The possibilities of development of a cheap form of motor railway have received scarcely any attention. The ordinary steam railway is ill adapted for mountainous districts, due to the small hill-ascending capacity of the locomotive. At the present time there is only one through trans-continental line in South America : the Trans-Andean, from Buenos Ayres to Valparaiso, which crosses the narrowing width of the continent in its southerly part. The great breadth of the continent is without any means of transport except the natural ones afforded by great fluvial highways of the Amazon. Some railway building is in progress in the region forming the great middle plain which extends from Argentina and Paraguay into Bolivia ; and extensive tracts of territory are being opened up for settlement and industry thereby. The principal feature of this work is the joining of the railway systems of the eastern and western republics, by means of which direct communication will be established between Argentina, Brazil, Uruguay, Paraguay, and Bolivia, Chile, and Peru. The heart of the continent, in its southern part, is therefore being placed in direct communication with the main seaports, both of the Atlantic and the Pacific coasts. But compared with the north American continent, including Mexico, the progress of railway construction in South America must be regarded as dilatory.

It is generally held that the Panama canal is to bring largely increased prosperity to the Latin American republics, or at least those which lie upon the Pacific coast : and it cannot be denied that benefits will accrue to the continent from the working of the great waterway. The principal benefit to be derived by the countries of the west coast of South and Central America will be in the means of more direct transport from Europe and New York without transhipment, and the avoidance of the long route round Cape Horn or through the straits of Magellan. As South America will become practically an island when the canal

is in operation, doubtless coasting facilities between the western, northern, and eastern coasts of the continent, which at present are limited, will be increased. The future value to the world of the canal is based on the assumption that steamship traffic and the steady movement of goods from one part of the earth's surface to another, the imports and exports of raw material and food products and manufactured articles, is to continue unabated. But it is to be recollected that, as far as North and South America are concerned, the peopling of these continents and their economic growth may tend more towards the absorption locally of their native products ; and the growth of home manufacture must lead to a diminished demand for foreign-made articles. Such conditions have already taken place in the United States and are bound to follow in Canada. Brazil and Mexico already consume almost all the raw cotton they produce, and supply themselves to a great extent with cotton goods from their own mills : and the same condition obtains largely with regard to sugar ; whilst the growth of population in Argentina must tend to absorb more and more the great stores of food in meat and wheat at present exported by that republic. How far the carrying trade of the canal will be influenced by such conditions of growing economic equilibrium in Europe, Asia, and America remains for the future to demonstrate, but the modern tendency would seem to be for nations to become more and more self-supplying and self-supporting.

The important navigable rivers of Latin America are confined, with small exception, to the Atlantic and Caribbean slopes of South America. Consequently fluvial navigation affords a comparatively small means of development within the great stretches of territory upon the Pacific coast. The Pacific-flowing rivers of Chile and Peru are mainly of value as water supply for irrigation, consisting in short, rapid, torrential streams in great part, unsuitable for navigation. The Guayaquil river is the only one of any magnitude, and this is not navigable by large steamers much beyond the port of Guayaquil. Equally unimportant are the westward-flowing rivers of Central America and

Mexico. It is upon the Amazon and its great stretches of navigable waterway, and the Rio de la Plata and its tributaries on the eastern side ; and the Orinoco and the Magdalena on the north that the continent depends for its natural means of communication. Brazil enjoys immense advantages in the distribution of its river basins, which afford means of access to the interior of the country in a striking way.

Latin America is greatly dependent upon the sea for its means of communication. South America, unlike Europe and Asia, is entirely surrounded by sea. There are no vast interior regions or separate races who, as in the Old World, do not feel the influence of accessibility by sea. On the other hand, South America and Mexico are but poorly endowed with natural seaports. The indentations upon their shore lines afford surprisingly few natural harbours capable of affording safe and accessible havens for maritime trafficking, without enormous outlay in defensive works and docks. Seaports such as exist on European coasts, deeply indented and well sheltered, are scarce, and the heavy outlay for harbour works in the Latin American countries forms one of the most serious items in the budgets of those republics.

If the geology and topography of Latin America gave rise to a paucity of facilities for natural means of communication, no less were the resources of the animal and vegetable world limited in earlier times. The present agricultural and pastoral wealth of Latin America has been built upon exotics. Neither the horse nor the cow, nor sheep, goats, swine, or any other four-footed domestic animal or beast of burden—except the llama and the dog—existed in the New World before the advent of the European ; and coffee, sugar, wheat, the vine, the orange and the olive, and many other of the most treasured food-products of mankind, were unknown to America before Columbus. Against these great gifts of Europe and Asia, America had her valued indigenous products of cotton, cocoa, or chocolate, rubber, the potato, quinine, and other useful matters to offer ; together with enormous mineral and forestal wealth, and the capabilities of her soil for reproducing the imported staples. The

scope and output of the great industries of Latin America have become of prime value to Europe and the United States, and are to an increasing extent attracting the attention of the trader and the settler. The coffee plantations of Brazil yield three-quarters of the world's supply of the coffee berry; and the meat and wheat industries of Argentina have become almost an essential source of food supply for Britain. The cotton, sugar, wool, and minerals of Peru are of growing importance; and the saltpetre of the Chilean nitrate beds has become indispensable to agriculture in many countries. The rubber of Pará, the outlet of the Amazon valley, is the most important source of supply of that article; and the coffee, chocolate, fruits and tropical products of Central America and Mexico have a high economic value.

The prosperity of Latin America is greatly affected by climatic conditions. A great part of South America, including Argentina, Brazil, Uruguay and other lands, has had, during the last ten years, a rainfall much below the normal for that region: and an excess is to be expected, and indeed has been experienced in the middle of 1912, when heavy losses in the crops on the Argentine pampas was suffered—with stoppage of the Trans-Andean railway for six months by reason of heavy snowfalls. The drought and the flood years of South America undoubtedly go in cycles, a fact which has become evident. The same phenomenon is observed with regard to the locust plague, for the locusts come in cycles of years and then disappear, practically, for about seven years. Upon rainfall naturally depends irrigation, which is a necessity of agriculture in most countries of Latin America. The coast of Peru and Chile is rainless and one of the driest strips of land on the surface of the globe: and the cotton, sugar, and other crops of Peru are practically all dependent upon irrigation; which science is more fully developed there than elsewhere in South America. As shewn in the account of the agriculture of the Incas, given elsewhere, irrigation was practised and developed in Peru in prehistoric times in a remarkable way. The northern plateau of Brazil, Brazilian Guiana, is in

large part an arid waste, due to low rainfall, and much of the eastern coast, such as the districts of Parahyba and the basin of the San Francisco river, suffers from long droughts consequent upon uncertain rainfall, whilst in Bahia pastoral industries have suffered and declined from continued decreased moisture. In Argentina millions of acres of land are uncultivable for lack of rain : and the condition extends to eastern Bolivia, where attempts at irrigation by means of artesian wells are being made. Well-water, however, is generally without the fertilising matter such as irrigation often requires. The alluvial deposits of British Guiana along the margins of the sea and river mouth are the seat of sugar estates, and are intersected by canals, made primarily for navigation by the early Dutch colonists, and which are also used as a means of irrigation. Notwithstanding the parched areas, a greater volume of rain falls upon the land of South America than upon any other equal area of the world, and when better methods of storing or distributing the surface water are brought about, as has been the case in other continents, South America, which at present lags in the application of the ancient science of irrigation, will greatly increase her utility as a reservoir of food supply for the world. The example of Egypt, India, and even California, Arizona, and Mexico, must be followed : lands where fertility and wealth have been wrested from what once were, and normally are, dry, desert regions. In Egypt it is estimated that as much as £8,000,000 has been spent in the last twenty-five years or more in irrigation works, in which period the population has doubled, and the cotton production more than doubled. In Mexico, a great deal of whose area has an insufficient rainfall, much more has been done in irrigation, and vast fortunes have been made in cotton, sugar, and other products under scientific storage and distribution of water, as elsewhere described : but much remains to be done. Parts of Mexico and Central America have the heaviest rainfall of any region, yet are, in places, almost arid and bare, but capable of fertility under the action of water. "Dry-farming" is yet unpractised.

It is a question of vast importance to South America as

to whether changes in the climate are being permanently brought about. On the Andes it appears that the glaciers are retreating, and the snowfall as a rule becoming less. Titicaca and other high regions shew the effect of increased evaporation, and dried river-channels abound. More than three-quarters of the western slope are deserts, and any permanent diminution in the rainfall would render them uninhabitable. In Mexico and western America generally it would appear that since man inhabited the land, the climate has changed to a large degree to more arid conditions.

The markets afforded by the growing population and increased wealth and powers of consumption of the Latin American people are the subject of strong rivalry among foreign manufacturing and exporting nations ; and the opportunities arising for the investment of capital in public works and joint-stock undertakings, in the development of mines, plantations, docks and railways are taking rank among the most important in the world. As described elsewhere, the amount of foreign money, mainly British, invested in these matters is approaching a thousand million pounds. Although agriculture is the principal industry of almost all the Latin American countries, the mineral resources of several of these republics must be regarded as among their most important assets. The mountainous districts of Peru and Mexico contain almost every mineral and metal of commercial and scientific value, although it has yet to be demonstrated that important industries employing coal and iron can be established in Mexico or South America. In the latter continent coal deposits have been regarded as scarce, and the coal inferior in quality ; but further examination shews that the exposed and upturned coal seams of the Andes, which exist in great quantities, will become of more than local value. The deposits of southern Chile have long been a valuable source of supply. The attention of experts in iron mining is being drawn to the ore deposits of Brazil, Chile, Peru, and Mexico. The petroleum beds of the two last-named countries, and of others, are important sources of present or future supply of oil-fuel. The copper mines of Chile and Mexico have long been of leading importance in

the world's supply of copper, and the increased output of Peru is proving that country to be an abundant source of the metal. The output of the mines of the great vice-regal centres formed by Mexico and Peru was largely silver: and at the time of the Mexican War of Independence, in 1810, the value of the yearly product of that metal was $27,000,000. A single district of Mexico, that of the famous mining centre of Zacatecas, produced between 1548 and 1867 more than $800,000,000 of silver. In Peru, the mines of Potosi and Cerro de Pasco were equally famous. The output of gold was also considerable; but the first great shipments of the metal were the result of the loot of the temples and palaces of the Inca and Aztec chiefs, by Pizarro and Cortes respectively. These stores of gold were obtained by the early Peruvians and Mexicans from alluvial deposits, and represented the natural accumulations of ages, concentrated in the beds of streams: but the gold was obtained for state and religious purposes, and was not employed as currency. Probably quantities were buried at the time of the Conquest.

The quantities of silver, and to a less extent of gold, recovered in Latin America from the mines in the time of the viceroys were very considerable. But it was not obtained under sound economical conditions. Mining was carried out largely under the system of forced labour, under which the miners were paid little or nothing, consequently the expenses of mining were the lowest possible. The life of the Indian miner was looked upon by the Spaniards and Portuguese colonists and taskmasters as of no account. It represented to them so many yards of excavation and sacks of ore. Directly the labourer failed, as he soon did under the lash, the incessant toil, and the rigours of the climate and poor food, he was replaced by another without exhausting the supply. Thus it was that the most difficult and remote regions were prospected and worked, and the result is seen to-day in the innumerable abandoned mines encountered throughout the mineral-bearing region of Mexico and South America, from Guanajuato to Potosi. It would be unjust to the Spanish monarchs of colonial times to assert that they drained away all the wealth of the Indies, or that they were

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necessarily purposeful in the oppressions and extermination of the Indian races. Royal commissions were sent out from time to time to enquire into abuses, and laws enacted to protect the Indians. A portion of the wealth extracted from the mines in the times of the viceroys went to build handsome churches, and to found public institutions. Some of the viceroys were wise and humane men who strove to better the lot of the Indian and the colonist, and to protect the latter from the Inquisition. Titles and rewards were bestowed by the kings of Spain upon the founders of the great mines, and royal charters granted to prosperous and loyal cities. The atrocious excesses committed upon the natives were largely the work of the too zealous or too grasping colonists and agents. It has generally been the colonist who has oppressed the Indian. Mining, in whatever part of the world and in whatever period, has led inevitably to the exploitation of the miners by mine-owners: and no land is free from the reproach. Mining and religious sentiment have been strangely and pathetically mixed in the Latin American countries. Deep below the surface in one of the old mines of Guanajuato, in Mexico, there is, or was until recently, an elaborate shrine lighted with 200 candles, always burning. These candles are provided by the miners, who economise their own supply, suffering the difficulty of traversing the dark galleries in order to do this homage to the Virgin. As they pass the shrine, whose illumination forms a sudden contrast with the black gloom of the labyrinths, staggering under the enormous load of a sack of silver ore, they bend the knee, and the accustomed hand comes up to make the sign of the cross. In the vast, ancient quicksilver mines of Huancavelica, in Peru, there were a number of elaborate chapels, and shrines, crosses and fonts, far down in the subterranean workings, but these were destroyed by the collapse of the mine, as described elsewhere. There are many other evidences of this primitive christianity of the native miner. There have, however, never been any proper laws, nor do any exist to-day, to protect the miner in Latin America, and he puts his trust in his saints rather than in his employer.

The reputation possessed by South America as a gold-bearing continent is a strong one, although vague to a certain extent. Gold exists in enormous alluvial deposits in the Andes, and attempts have been made to work these in some instances by the methods of hydraulic mining, in others with dredges; mostly, however, without success from a commercial point of view. In Peru and Bolivia such enterprises may prove successful in the future, but in Argentina large sums of money have been lost, notwithstanding that the work was undertaken on the advice of experts. It would seem that nature has reserved the gold in its alluvial form, in the streams and gravel deposits where it lies richest, for the benefit of the individual miner or the Indian, who is often able to obtain small profits where a joint-stock enterprise with headquarters in London or New York fails. Nevertheless, it cannot be doubted that great quantities of recoverable gold exist. Perhaps the most reliable class of gold mining is in the lodes and ore-deposits, thousands of which exist in the Andes, often traceable for miles, under conditions which in other countries would long ago have offered allurement for investment of capital. The lodes are often long, wide, and deep, and very rich, and the formation of the land permits working by adit-levels, and water power is often available. Ancient workings abound on the outcrops of such lodes generally, the hills of Mexico, Peru, Colombia, and Brazil being honeycombed in places with such, and these were often abandoned because methods of drainage were expensive. The ores were crushed and the gold extracted by means of rocking-stones, in Peru, which still remain in evidence. There is no doubt that many of these mines are capable of being worked by modern methods as profitable enterprises. In many cases enormous quantities of rich ore have been extracted from the mines and profitably treated. It is, however, noteworthy that the number of paying gold mines in South America is very small at present: and it is doubtful if the gold mining industry will contribute very greatly to the advancement of Latin America, as in California, Australia, and South Africa. In those lands it

brought a large and active population with it, but in Latin America this is rarely the case, and the benefits fall mainly to foreign company promoters and shareholders. The total output of gold for the whole of Latin America in 1912 was £7,500,000, against £40,500,000 for South Africa. For South America alone it was but £2,000,000. It does not increase.

Rubber of late years has been one of the products of Latin America most sought for; but both in Mexico and South America its production has been attended with grave difficulties and abuses, either financial or as concerns labour. In the Amazon valley rubber gathering has been attended with a heavy loss of native life, both from the natural dangers of climate and forest environment, and from the almost incredible abuses practised in some cases upon the indigenes, by whom the work of rubber gathering is performed. The ruthless destruction of these forest Indians was not even stayed by economic considerations; nor by the consideration that, once depopulated of its native inhabitants, the forests will be without labour, and the work of rubber gathering will be effectively paralysed. It has been affirmed that every ton of rubber from the Amazon valley has cost two human lives. Yet the wild rubber is still by far the most important source of the world's supply, and must remain so for a long period; and the prosperity of a great part of Brazil depends entirely upon it. Rubber was a gift of Latin America to the world. The Spaniards, when they arrived in Mexico, found the natives playing a national game of tennis with rubber balls in the great stone-built "tennis-courts" which are among the archæological wonders of Central America. In the Amazon valley the early Portuguese observed a tribe of natives who used a species of squirt, or syringe, as part of their weapons, and from this the *jeringa* rubber-tree took its name. These matters formed the earliest sources of knowledge of india-rubber to Europeans.

Among the difficulties of life and development of the Latin American states, flood, drought, and pestilence are severe. On both coasts yellow fever, plague, smallpox, malaria and other diseases, epidemic and endemic, have been the scourge of centuries. But just as drought and flood

may be brought somewhat under control by engineering and agricultural science, so does pestilence tend to yield to medical science. The swamp and the mosquito, yellow fever and malaria—whether at Rio de Janeiro, Santos, Vera Cruz, or Panama—are being brought under control by sanitary improvements and the example of northern races; and it is shewn that these scourges are the result of human negligence, rather than being an inevitable result of natural conditions.

Of another class, however, are the convulsions of nature which paralyse man's hand and bring destruction to his works—the earthquakes and tidal waves which so frequently occur on the western side of the Latin American countries, and which have proved serious scourges in the past history of the coast towns of the western slope. The whole of the Pacific coast of America, from Valparaiso to San Francisco, suffers from the effects of earthquakes; and the destruction of those two cities in 1906 was not an isolated phenomenon, for the Chilean and Peruvian coast towns, Iquique, Lima, Arequipa, Callao, Arica, Piura and others, as well as the Mexican towns of Chilpancingo, Acapulco and others, have suffered. The destruction of Callao and Lima by earthquake and tidal wave in the past was one of the most terrible events of Peruvian history. The greater part of the buildings was destroyed; and an enormous wave followed and swept far inland, its ravages still being visible even to-day in places along the coast. The shock which destroyed Piura, in Peru, in 1912, was felt as far north as Guayaquil, and inland as far as Cajamarca. In Guatemala the added menace of volcanic eruptions exists, towns and plantations having been destroyed by lava flows and earthquake shocks, both in early and recent times. These disasters along the Pacific seaboard may be repeated at any moment. The remedy, as regards dwellings, is in a solid low type of construction: and it speaks well for the solidity of the Spanish colonial buildings that they have resisted the effects of earth unrest to so considerable an extent. It is the cheap form of construction that suffers. These convulsions of nature in Latin America are, however, probably not worse than those which afflict Japan and other lands.

Financially, the Latin American republics, practically without exception, show increasing imports and exports, sometimes rapidly swelling lists of such ; increasing investments of capital from abroad, and expanding national revenues, brought about mainly by the growing commercial and internal development. Argentina, with its population of less than 7,000,000 inhabitants, has a greater foreign trade than Japan with 50,000,000. But if trade and revenues increase in Latin America, so do expenditures. In providing for the exploitation of their resources, and in covering their national requirements of government, education, armaments, and other matters, the republics of Latin America have brought about an almost chronic condition of budgetary deficit. With the sole exception of Mexico, and recently Peru, a budget surplus among the Latin American states is unknown. They live generally beyond their income ; although there are certain extenuating circumstances for the condition, in some cases.

With the exception of Brazil and the three Guianas and some of the Antilles, Spanish is the universal official language of Latin America, which thus forms a vast community without those difficult barriers presented by a foreign tongue, such as exist between European nations. The laws, decrees, newspapers and literature of one republic pass easily to another, and mutual understanding is greatly facilitated : a condition which tends to make for peace in international relations, and is of much value in matters of commerce. Spanish, as a language of world-commerce, may be ranked second in importance to English, and the field over which it is in use is constantly growing. Spanish, moreover, is at the same time the easiest yet one of the richest of languages. Its facility of expression and its absolutely phonetic quality render it far easier to acquire than any other language in the world. As spoken in Latin America the *Castellano*, or Spanish, differs somewhat, but very slightly, from that of its mother country. It may be regarded as more advanced and virile, and although there are marked variations between the mode of speech and accent of the different republics, these depart far less from the common stock than do the

dialects of Spain itself. In nothing is the innate courtesy of the people of Spanish race more markedly shewn than in their attitude towards foreigners endeavouring to express themselves in that language. In Spanish America, Spanish has been greatly enriched by the adoption of words and phrases from French, English and Italian, and it may almost be said that it is growing to meet the demands of the numerous people of the old world who have arrived in such considerable numbers. Italian is second in importance to Spanish and Portuguese, in South America, due to the considerable Italian immigration; but English is very widely understood and spoken, and its acquisition is considered a necessary part of a commercial education. French remains the foreign language of greatest distinction.

There is a peculiar interest to the traveller who does not necessarily desire the modern comforts of hotels and trains, about life and travel in the Latin American countries, which cannot be found in the United States or Canada. It lies partly in nature, but mainly in the setting and atmosphere of an older social system, a simpler, kinder, and more human outlook. The dominant motive of dollar-getting, to which life in the United States and Canada is, in its present phase, largely subordinated, is absent. The people seem to belong to their soil in a greater degree: they live nearer nature, and the system of caste, however objectionable it may seem to the philosopher from the democratic point of view, certainly preserves between man and man a greater sense of courtesy and refinement. The blatant "business" type, so common in North America, has not come to being in these southern republics. The overalled mechanic, with his oaths and oily dress and aggressive tongue, who forms so prominent a class in the United States, does not flourish on Latin American soil. That its pleasing individuality should be maintained, with, at the same time, the upraising of the lower classes to a better position of democratic responsibility and civic prosperity, must be the wish of all disinterested observers of Latin America. The distinctive lights and shades of life which it gives to the New World are not necessarily, it cannot be doubted, inconsonant with advancement.

The scenery and landscape of Spanish America, although in places extremely beautiful, nowhere vie with the soft beauty peculiar to England, for nowhere is that character of countryside found in the three Americas. Nevertheless certain regions are soft and romantic, accentuated by the striking and the stupendous in their surrounding regions, where nature has worked on a vast scale. What the traveller from Britain misses in North and South America is that medium of climate, topography, and scenery which is characteristic of the British Isles. Between the stupendous mountain ranges, the vast arid deserts, and the profusion of tropical vegetation, there is rarely discovered the happy mean of wood and stream and pastoral countryside of the favoured islands of Britain, and this moulds, to some extent, it cannot be doubted, the character of the people. Rural life in these communities, the village and the parish, does not exist as known in Britain.

The traveller who adventures away from the railways and towns in Latin America is greatly thrown upon his own resources and finds himself constantly close to nature and to the primitive virtues and defects of mankind therein. The atmospheric effects in the arid lands of Latin America and in the high Andes are of a curious nature often. The mirage of the deserts is a not uncommon feature, on the arid Mexican plateau and on the scorched plains of the Chilean and Peruvian Saharas, or littoral, and travellers at times have been deceived by visions of water, imaginary pictures of rivers, towns, palaces, trees, and crowds of people ; and in some instances the inexperienced have almost been lured to destruction in the belief that they were approaching water or a settlement. The utter silence of the sun-beat desert is, on occasions, a silence that seems to speak, as if the sunlight produced some sound on the tympanum of the ear ; and there are mysterious desert noises at times produced by " singing " sand dunes and other agencies. In the Andes remarkable mist effects are produced. Perhaps the traveller, descending from some high upland, approaches what appears to be the surface of a billowy sea or lake, whose edge laps the rocky road, but which in reality is a

thick bed of mist occupying the whole valley, with an upper surface broken into mist-billows, through which man and horse plunge, leaving the sunlight above; and, on gaining the lowlands and looking upwards he finds he has descended through the clouds. A phenomen observed occasionally, although rarely, is that of the anthelion, the rainbow-coloured halo or chromatic nimbus projected upon the surface of the mist-sea at the moment of approaching it, from the traveller's head, by the rays of the sun. These mist banks in the valleys disperse often as the heat of the rising sun increases, and vanish rapidly, bursting upwards and dispersing in a remarkable manner; whilst at night, from some high point, they may be observed collecting and advancing, engulfing the landscape, and rolling against the precipices like an advancing sea. The sunset effects upon high mountain peaks are often of extreme beauty. The base of the peak may be wrapped in the purple depths of the advancing darkness, whilst the snowy portion above is dyed carmine and gleams like a ruby, set against the darkening sky behind. The same effect is observed on mountains which are not snow covered, although less marked. These effects are, of course, not confined to the Andes, but are common to other mountain systems.

For purposes of description, by reason of their geographical situation, the Latin American republics fall into several groups, and will so be considered. Brazil stands alone, both geographically and by reason of its enormous size. Argentina, Uruguay, and Paraguay may be classed as the republics of the River Plate. Ecuador, Peru, Bolivia, and Chile are described as the republics of the Andes and the Pacific. Colombia and Venezuela are the northern republics of South America, facing upon what has been termed the "American Mediterranean." Under the heading of Central America are classed Guatemala, Salvador, Honduras, Nicaragua, Costa Rica, and Panama; and British Honduras forms part of the region embraced. Mexico stands apart as forming a portion of the North American continent. The island republics of Cuba and of Haiti are naturally units. The various possessions of foreign powers in Latin

America, such as the Guianas, the Antilles, the Falkland Isles, British Honduras, and others, whilst geographically they are part of Latin America, can scarcely be so considered racially.

The areas and populations of the Latin American republics, as before observed, can, in some cases, be stated only approximately, or as estimates. They include, for the Andean countries, certain debatable territories, as described elsewhere, and are as follows :—

Country	Area	Population
	Square miles	
Brazil	3,218,130	25,000,000
Argentina	1,135,840	7,890,000
Mexico	767,000	17,000,000
Bolivia	708,000	2,800,000
Peru	700,000	4,600,000
Colombia	438,000	5,000,000
Venezuela	394,000	3,000,000
Chile	292,000	3,770,000
Paraguay	196,000	1,000,000
Ecuador	116,000	1,700,000
Uruguay	72,200	1,430,000
Nicaragua	49,200	740,000
Guatemala	48,300	2,200,000
Honduras	46,200	600,000
Panama	32,400	350,000
Costa Rica	23,000	460,000
Salvador	7,225	2,000,000

To which may be added:

Cuba	45,900	2,500,000

A total approximate area of 8,250,000 square miles and an approximate population, in round numbers, of 82,000,000 people.

The republics of Santo Domingo and Haiti, occupying the Island of Santo Domingo, have areas respectively of 18,045 square miles and 10,204 square miles, and populations of approximately 700,000 and 1,600,000; Haiti being a negro republic and Santo Domingo the oldest Spanish settlement in the New World.

CHAPTER II

THE UNITED STATES OF BRAZIL

Stretching far around the eastern and northern shores of South America, and penetrating into the most remote regions of the great continent, lies the huge, incoherent republic of Brazil: a land whose associations are redolent of colonial romance, of empire and slavery, of wealth in the past, wrung from the tropic cane-fields, from diamonds and gold; of vast expanses and sunny uplands, of mysterious rivers and dark, impenetrable forests: a land which nevertheless contains to-day some of the most progressive elements in the Latin American world. The United States of Brazil, as the Portuguese-speaking republic of South America is officially described, is by far the largest political division of Latin America. It exceeds in size the United States of North America, excluding Alaska; its area being estimated at 3,270,000 square miles. From north to south the country measures nearly 2,600 miles and from east to west nearly 2,500 miles. The length of the coastline of Brazil is almost equal to the combined lengths of the Atlantic and Pacific coast lines of the United States; and the country is larger than the whole of Europe without Russia. The population of this immense region is estimated approximately at 25,000,000 inhabitants.

Brazil is distinguished from its neighbours in having been the only self-contained empire in America, with the exception of the brief imperial regimen of Mexico. As regards extent of territory, Brazil remains an empire. It sprawls so extensively across the continent that its frontiers are contiguous with every South American republic except Ecuador and Chile; a giant which has always been accused

of perennial endeavour to absorb portions of its neighbours' possessions. From the earliest colonial times the Portuguese were trespassers, and this policy has given rise to the constant perturbation of Brazil's neighbours upon the Pacific coast. In the regions of the upper Amazon and its tributaries great areas of savage territory are still in dispute, and have been made the subject of surveys, treaties, and arbitration ever since the early time when the crowns of Spain and Portugal invoked papal decrees in support of their respective sovereignties in America.

The Atlantic coast of South America, of which Brazil and Argentina possess the major portion, must be regarded as of greater economic importance than the Pacific coast. South America slopes away from the wall of the Andes, which parallels the western coast, leaving but a narrow littoral between those mountains and the sea; and the continent has its natural outlet upon the Atlantic and the Caribbean sea. Under present methods of transport the Andes must remain an obstacle to the economic development of Chile, Peru, and Ecuador from the east. The harbours of the Atlantic coast are of far greater capacity and importance than the generally exposed roadsteads of the Pacific side of the continent, which possesses no river mouths of the importance of those of Brazil and Argentina.

The population of Brazil cannot be estimated with anything but approximate approach to accuracy. The defective methods of census-taking and more or less arbitrary estimates, together with the remoteness of certain regions and the dislike of the natives of the outlying districts for enumeration, render the returns faulty. The total number of inhabitants, according to different authorities, has been variously estimated at 17,000,000 to 25,000,000; 20,000,000 being taken as a general basis. Regarding the country as a whole, Brazil contains more men than women. It has also a low proportion of only about 7 per cent. of foreigners. Of the population of the capital 25 per cent. are foreigners, and the excess of women over men exists only in those states which specially attract immigrants from abroad, who are almost entirely males. The proportion of foreigners is

increasing, nearly 200,000 immigrants having entered in 1913, forming a large increase over 1910. But post-war immigration does not reach these figures.

Statistics of persons of colour, of African descent, are unreliable in Brazil. A process of absorption is taking place with the considerable negro element, which, whilst it has a deleterious effect upon the nation at the present time, and will doubtless make itself felt for a generation, should result in the ultimate formation of a type. Brazil differs from almost all the other republics of Latin America in having the negro as one of the constituents of its people. It is to the free admixture of the white colonists, the native Indians, and the men of African race, who were introduced into the country as slaves, that the real Brazilian nationality is due. The Portuguese and Spanish colonists of America intermixed with the coloured races to an extent which was unknown in Anglo-America, and the difficult problem of the colour line which exists in the United States has no place in Brazil. The early policy of Portugal was to encourage the union of the white man and the coloured woman, and its effects have remained in the condition wherein no prejudice is entertained against the coloured race. Nevertheless the Portuguese republic does not escape altogether the castigation resulting from the past enormity of slavery, and the low negro element in the seaports and on the plantations is a degrading feature of national life.

The evolution of self-government in Brazil has been a difficult one; although its history has varied greatly from that of the Spanish American republics. Independent monarchy survived for sixty years, and came to an end in the bloodless revolution of 1889; precipitated by the abolition of slavery in 1888. The emancipation of the negro brought about the inevitable punishment which the system of slavery has sooner or later inflicted on those communities who have maintained it. The foundations of Brazilian society were thrown into chaos, and plantations were abandoned by hundreds, due to the loss of labour. The slave-owning and land-owning classes, alienated from the imperial

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RIO DE JANEIRO

government by the Act of Abolition, brought about the fall of the monarchy, and this was followed by the rule of military despotism, which has never entirely disappeared from Brazil. Whatever evils, however, might have resulted from the overthrow of an imperial regimen must be viewed as necessary adjuncts of democracy in such a situation, and that democracy once established must be regarded as a measure of progress.

The constitution and federal form of government which were adopted on the fall of the empire have invested the ruling powers of the nation in three branches of government, partially independent of each other, modelled largely upon the constitution of the United States, and known respectively as the Executive, Legislative, and Judicial, represented by the President and his Cabinet, the Congress, composed of two chambers, and the Supreme Tribunal. The republic is divided into twenty states, each with its own administration. These states are therefore autonomous, and conserve their right of control over all public lands, mines and industries, and over all local affairs. Primary education is supported and supervised by each state, and secondary and superior education by the federal government. The foreign affairs of the nation are directed exclusively by the federal government, as are the maintenance of the army and navy and the imposing customs house dues. The president is elected by direct vote, and the cabinet ministers are appointed by him. The members of the senate chamber and of the chamber of deputies are elected by direct suffrage; the first for a period of nine, the second for a period of three years. Deputies serve under the system of proportional representation, and are elected on a basis of one for each 70,000 of the population, but at least four are appointed for each state, whatever be the population. There are three senators for each state. The senators are required to be over thirty-five years of age, and both senators and deputies are paid. At the present time the Senate chamber contains sixty-three members, three for each state and three for the federal district. Although elected for nine years, one-third of

each delegation of senators is renewed every three years. Both senators and deputies are immune from legal process, except in certain specified circumstances. The regular annual sessions of the Legislature are of four months' duration, but when circumstances require they may be prolonged.

The president is elected for a term of four years. He must be a native of the republic and over thirty-five years of age; and upon retiring he is ineligible for a second successive term. Similiar conditions attend the office of vice-president. The president receives a salary of 120,000 milreis, and the vice-president 36,000 milreis. The Cabinet ministers are six in number; those for Foreign Affairs, War and Marine; Communications; Public Works; Finance; Agriculture, Industry and Commerce. They are responsible to the president alone for their advisory acts, and take no part in the session of Congress. They may be removed or replaced at the will of the president. The president issues decrees and regulations for the execution of laws and resolutions approved by Congress, or he may ignore or veto them. This veto may be over-ridden by a vote of a two-thirds majority of each chamber; and any act of Congress which has not been vetoed, but left unsigned by the president for ten days, becomes law. Further offices of the president are those of commanding the armed forces of the republic, of nominating diplomatic representatives and the members of the Supreme Tribunal, for the approval of the Senate: as well as appointing the prefects of the national capital. The president advises Congress in an annual message at the opening of the session and is empowered to negotiate *ad referendum* treaties with foreign nations, to declare war in case of invasion and martial law in times of serious political or other disorder. He may be impeached for his official acts and suspended from office by the Senate, or tried for criminal offences by the Supreme Tribunal.

The Supreme Tribunal, or judicial, is composed of a court of fifteen judges in the national capital, and a court in each state capital. The appointment of the judges is for life, and they are removable only by judicial sentence or impeach-

ment. The position of solicitor-general to the nation is held by a member of the Supreme Tribunal. These functionaries are appointed by the president with the approval of the Senate, but nominally the tribunal is independent of the control of the Executive, and it appoints its own presiding officers. It possesses original and appellate jurisdiction, and authority to decide upon the constitutionality of laws and acts of the state governments. Each state possesses its own independent local courts and laws, subject, however, to the review of the Supreme Tribunal. The federal district possesses a municipal council instead of a legislative, with its own system of municipal and higher courts. The civil code of Brazil is based upon Roman law. The army and navy are subject to special laws, with military courts, and are immune from civil process.

The twenty states are divided, for purposes of local government and law-giving, into judicial districts, known as *comarcas*, and townships or *municipios*, which are the smallest self-governing divisions. The permanence of representative government and institution is safe-guarded by the necessary provision for autonomy of the local districts, in the constitution. For ecclesiastical purposes the parish, or *parochia*, is maintained. The states are :—

States	Capital	Area Sq. Kilometres	Pop. 1921
Amazonas	Manáos	1,894,724	378,476
Pará	Belém	1,149,712	809,886
Maranhão	S. Luiz	459,884	683,645
Piauhy	Therezina	301,797	441,350
Ceará	Fortaleza	104,250	1,179,197
Rio Grande do Norte	Natal	57,485	424,308
Parahyba	Parahyba	74,731	630,171
Pernambuco	Recife	128,395	1,649,023
Alagoas	Maceió	58,491	848,526
Sergipe	Aracajú	39,090	426,234
Bahia	São Salvador	426,427	2,746,443
Espirito Santo	Victoria	44,839	362,409
Rio de Janeiro	Nictheroy	68,982	1,325,929
São Paulo	São Paulo	290,876	3,700,350
Paraná	Curytiba	221,319	554,934
Santa Catharina	Florianopolis	74,156	463,997
Rio Grande do Sul	Porto Alegre	236,553	1,682,736
Minas Geraes	Bello Horizonte	574,855	4,628,553
Goyaz	Goyaz	747,311	428,661
Matto Grosso	Cuyabá	1,378,783	191,145
Districto Federal		1,116	1,500,000
Territorio do Acre		152,000	86,638
		8,485,776	25,142,611

These figures are from the last census, as supplied by the government.

Brazil, for purposes of general description, may be divided broadly into three regions, those of Northern Brazil, Central Brazil and Southern Brazil, distinguished from each other by their products rather than physically. The northern region is that dominated by the great Amazon river and its affluents, and includes the states of Amazonas, an enormous area of territory upon the northern bank of the river ; Pará, upon the southern bank, also a very large state ; Maranhao, upon the coast, Piauhy, and part of the state of Matto Grosso. This region principally comprises the Amazon lowlands, which are covered with dense forest growth and are subject to an excessively hot, tropical climate and heavy rainfall. There is little if any change in the seasons in the forest region, except for variation in the rainfall. This enormous region of Northern Brazil, two and a third million square miles in area, is very thinly populated, having an average of less than one person to the square mile. It produces 96 per cent. of the rubber exported by Brazil, together with the Brazil nuts, and about a fifth of the cocoa and a tenth of the cotton exports of the republic.

The region comprising Central Brazil is much smaller in extent, having an area of about 340,000 square miles. This is much more thickly populated than the northern region, and is of greater importance industrially. It includes the states of Ceará, Rio Grande do Norte, Parahyba, Pernambuco, Alagoas, Sergipe, and Bahia, all forming part of the Atlantic littoral. Although lying in the tropics, the highland character of a part of the region and the mountains which cross it ensure a lower average temperature. The agricultural and pastoral industries are the most important, yielding some of the principal products, such as tobacco in considerable quantities, 96 per cent. of the export being made from the region ; 84 per cent. of the cotton, almost the whole of the sugar, and 77 per cent. of the cocoa. Nearly all the goat and sheep skins exported by Brazil are produced in these states, and 70 per cent. of the Brazilian diamonds.

The southern division has an area of 584,000 square miles, and although small in comparison with the northern, is the most important part of Brazil, both in point of population and as regards native products. Within this area are the states of Espirito Santo, Rio de Janeiro, Minas Geraes, São Paulo, Paraná, Santa Catherina, Rio Grande do Sul, and the Federal Capital. These states embrace the littoral to the boundary of Brazil with the republic of Uruguay. The region is traversed by a great plateau, running from north to south, parallel with the coast, and is traversed by the tropic of Capricorn, slightly to the south of Rio de Janeiro. The elevation of the plateau induces a more equable climate, and the southern portion, being outside the torrid zone, is temperate. With its fertile soil, drained and watered by numerous rivers, the region is an exceedingly valuable one agriculturally, and furnishes as its staple product the great coffee crop of Brazil, whose export provides nearly three-quarters of the world's supply of the berry. Stock-breeding is also carried on, and the products of the industry are exported. The *Yerba Maté*, or Paraguay tea, is cultivated in this region, and the mining industry carried on in certain districts produces almost all the gold and manganese exported from the republic. It is principally within these states that the great railway network of Brazil exists; the various lines which constitute so marked a feature of foreign industrial enterprise in the country.

The status of the inhabitants of Brazil is greatly bound up with the matter of land tenure. Agriculture, the great basis of Brazilian industry, is controlled principally by large estate owners, of which the *fazendas* or coffee plantations, are the most typical. These great estates are the homes of a landed aristocracy, and in some respects are virtually small sovereignties. After the abolition of slavery, a system of colonisation for foreign immigrants was established in order to provide labour for the estates, which had been depleted of their hands by the abandonment of their work by the negroes, who went to the towns to a considerable extent after their emancipation. A great wave of immigration grew to being under the state-aided colonisation and contract systems,

which lasted until 1902, bringing more than a million Italians into the country; and the labour of these immigrants helped to develop the rich coffee-growing *fazendas* of the state of São Paulo, which became the wealthiest part of the republic. But the Italian labourers derived little permanent benefit from this prosperous industry, although at certain times they made good wages. During the years of prosperity brought about by profitable coffee-growing large numbers of the Italians settled on the plantations, and were tolerably well treated, but when the price of coffee fell their wages declined with it, and they suffered considerable hardships. Consequent upon these conditions the Italian Government sent a commission to report upon the condition of the colonists, and as a result prohibited the system of free emigration to Brazil. This prohibition took effect in 1902, and Italian immigration materially decreased, numbering in the following year only 9,000 or 10,000, due to the restrictive action. The colonists became unsettled and in many cases habitual nomads, leaving one state for another and even one republic for another at the end of the season; and even the best-disposed of the estate owners cannot retain more than a portion of their labour. At the present time many of the Italians would not leave the country if they were able to purchase or obtain small holdings, but the large estates are never, or rarely, subdivided. This condition of conserving large landed estates obtains in nearly all Latin American countries, and tends to shut off both natives and immigrants from participation in the more accessible and fertile lands. These conditions were specially marked in the great coffee-producing state of São Paulo. Regarded from a democratic standpoint labour on the great estates is a species of peonage or serfdom, and order is maintained in many cases only because the workers are illiterate, or are prevented by local decrees from forming societies for their own protection. The restrictions concerning emigration by the Italian government have now been removed.

The Italian population in the state of São Paulo numbers over 1,000,000 and forms the most compact colony of Italians

that has been created overseas. The Italian colonists are easily assimilated, as a rule, and are highly esteemed, the more so when their numbers decrease and their services are less easily obtained.

Immigration and colonisation in Brazil steadily increased, and for the year 1913 nearly 200,000 immigrants were registered, an increase of 20,000 over the previous year. Of the total 76,700 were Portuguese, 30,900 Italians, 8,000 Russians, with 10,800 Turks, 8,000 Germans, 850 British, 41,000 Spaniards, and slightly over 1,500 French and 7,000 Japanese. At the present time there exist in Brazil thirty-eight foreign settlements or colonies. The German population was estimated in 1906 at 350,000 to 500,000, chiefly settled in colonies in the southern states, where they form a desirable community. In 1920 the total immigration had fallen to 71,000, of which 34,000 were Portuguese, 10,000 Italians, and 9,000 Spaniards.

The native people of Brazil, as regards the upper classes, are well-educated, and of somewhat old-world refinement and character in certain respects: the aristocratic, feudal element which grew up around the monarchy having been productive and conservative of these qualities. Their chief defect is that, as a class, they remain generally oblivious to the great bulk of poor and ignorant population around them, half savage in certain regions; a reproach which, however, is to be laid upon all Latin American oligarchies. In business and in the development of their factories and industrial institutions they are clever and energetic; and efforts for the improvement of the working population in certain districts have undoubtably been made. The imaginative temperament of the Brazilians and the power of the Portuguese language for poetic expression, together with the love of art, music, and literature strongly inherited from their progenitors, the Latin race of the Old World has led to a marked production of native poetry. In science, however, little has been done of a practical nature, and the exploration of the country and its resources has been due mainly to foreign scientists. They are a

pleasure-loving and happily disposed people; and their women are vivacious and handsome, with their own marked type of beauty, which differs considerably from the usual Spanish American type. The Brazilians must be regarded as a virile people, full of possibilities and productive of excellent human material for the moulding of democracy in the coming years.

Notwithstanding that the Brazilians have a strong natural taste for literature, art, and science, the country suffers greatly from the backward condition of education. Not more than 20 per cent. of the population can read and write, the lowest rate of illiteracy being in the southern half of the republic. As primary instruction is supported by the various states, the condition is in local hands; and this instruction is free, but not compulsory. Private schools are numerous and considered to be the most efficient, but higher education is principally confined to professional schools. The love of scientific titles is a passion with the Brazilians. Soon after Independence, and while they were still under the influence of the ideas of the mother country—which bequeathed to them the Catholic religion as the religion of the state—the ambition of every family which could afford to give a superior education to its son was that he should become a priest. Afterwards the ambition was to make him a "doctor," which is the title given not only to medical men, but also to bachelors of law, to engineers of all kinds, and even to the officers of certain military engineer corps, lately extinct, as also to staff officers. The Brazilian people, although theoretically democratic, have a tendency to look upon the educated as beings of a higher class. "The proof of this is that the authorities are almost all 'doctors,' and that families which have become rich in other or essentially lucrative professions, sometimes make all their sons 'doctors' and marry all their daughters to men with the same title.* "

This condition, however, has been altered of late, due to new laws; and the methods of higher education in Brazil differ somewhat from those in other Latin American countries,

* A Brazilian professor, in *The Times*.

in that Brazil possesses no universities. The difference is to some extent one of form rather than reality, the professional schools, as of medicine, engineering, law, etc., existing separately instead of under one management. The national schools of the professions, such as those of medicine at Rio de Janeiro and Bahia, or of engineering and law, enjoyed, prior to the new educational law enacted in 1911, practically a university prestige, unattained by local or private schools. The conferring of the doctorate was accompanied by the ceremony and solemnity attending the universities of other lands, and the degree possessed national privileges. But this has been abolished by the new law, under which Brazil has decided that the title of doctor is undemocratic. The cap and gown, and the aristocratic-seeming rights and prerogatives of the old faculties and the elaborate ceremonies connected with the conferring of the coveted doctorate, are now abolished ; and the graduate receives in their place a simple certificate of completion of study, which permits him to practise his profession. The national schools, which formerly enjoyed, in law, medicine, and engineering, such rights as belonged to the universities of the middle ages, have lost the authority conferred by federal monopoly, and at the present time any state of the republic, or any city, sect, or society, may set up its professional school or university, whose certificates of graduation will be equally accepted in all parts of the country. As long as such an institution remains self-supporting it has full freedom as regards curriculum, scholars and professors, but when a subsidy from the government is asked, and this generally follows in a community where endowments are difficult to raise, its regimen must conform to the government requirements : a system which in practice is expected to make for full efficiency. Physicians, lawyers, engineers, pharmacists and others may be produced by federal, state or private schools under the new enactments, and instead of a small number of national faculties of the sciences as formerly, a far larger number, and more widely distributed, may result. This " democratisation " of higher education in the largest

republic of Latin America is a condition of considerable interest. The government hopes thereby to reduce the number of those who aspire to purely academic honours, and to direct the intellect of their youths to fields of industrial and practical usefulness.

The prevailing religion in Brazil is that of the Roman Catholic church, which embraces more than three-quarters of the population. The Protestants of various denominations number about 150,000 persons. There are about 5,000 of other faiths and 10,000 of no religious profession. The un-Christianised Indians number somewhat less than three-quarters of a million. The large number of foreign immigrants constantly arriving, being drawn almost totally from Roman Catholic countries, insure the stability of the predominating faith in the republic. This, however, is not a state supported religion, as the constitution adopted after the revolution of 1889 brought about the separation of church and state. The constitution forbids the establishing or subsidising of any sect of religious worship, but freedom of religious observance of whatever kind is guaranteed. Formerly the church had exercised a preponderating influence in matters concerning education and the social life of the people, and until its domination was broken real reforms in these matters were impossible. The immoral character of the churchmen, which was long the subject of serious indictments against its regimen, contributed to the fall of the state church. Disestablishment brought about civil marriage, civil registry of births and deaths, and the secularisation of cemeteries; and the abolition of various privileges and abuses. The church retains its influence strongly through the confessional and other rites, whose observance is firmly established in the character of the devout of the Brazilian people. It maintains eleven seminaries for the education of priests and a large number of private schools, especially for girls of the better class, whose families patronise them largely. There are also a number of Protestant mission schools. The influence of the church is further maintained by reason of the beneficent work of its lay orders, and through hospitals and asylums

controlled thereby in every part of the republic. In almost every town of importance Misericordia hospitals are found, and institutions for orphan girls ; and nowhere have charities received more generous support than in Brazil. A small number of congregations scattered through the country constitute the Protestant element ; including the German and other European colonists. The Brazilians, like all Latin America people, are strongly addicted to the outward pomp of religion, especially the women, who are the staunchest supporters of ecclesiasticism. Among the male element the inevitable tendency towards materialism asserts itself growingly.

Brazil, although a country of vast extent territorially, has its wealth and population very much concentrated in the states nearer the coast. In this respect the republic differs much from some of the Spanish American countries, especially from Mexico, the next largest in point of population, which is studded with capital cities more or less distributed over its surface. This concentration of life near the seaboard follows inevitably upon the natural formation of Brazil, and the character of its people. A great democratic movement to the west, such as was so marked a feature of the expansion of the United States, never came to being in Brazil. The physical configuration of the country is such that it cannot be regarded as a unit, but as a territory of varied sections, and this quality is to a certain extent reflected in its governance. Under the Brazilian constitution considerable freedom of governance is allowed to the individual states, especially regarding the collection of export dues. Legislation necessary for one part of the country is not suitable for another, whose conditions may vary so widely. The means necessary for the development and progress of enormous uninhabited tropical regions are naturally not always compatible with the interests of the temperate and thickly-settled southern states. These conditions offer serious problems for the efficient government of the republic. Too great a relaxation of the federal authority leads to the engendering of autonomous ideas in the distant states, weakening to the integrity of the nation ;

whilst on the other hand if mandates from a distant capital are too rigidly interpreted misunderstandings are created. The miscellaneous character of the population offers its own serious problems. Millions of Indians and negroes act often as a retrograde force, clashing with or obstructing the energy of the white people. This extensive and inferior element is not likely to make much headway in self-government until the classes who control the political affairs of the country have truly espoused democratic principles, in action as well as in oratory. Brazil has been controlled by militarism since the fall of the monarchy, and the element is a menace to domestic affairs and to international relations. The serious disturbances which have taken place of very recent time, when the army has striven to assassinate president and ministers and the navy has turned its guns on to its own capital, shew how slow is the growth of a true sense of order. Brazil is in reality a conservative and intellectual country, with valuable social elements. It is dowered with an exceedingly liberal share of natural wealth, but except as to certain special products it is stagnant, and the soil has yielded up but a small portion of its powers.

The Portuguese progenitors of Brazil inaugurated the unsound practice of devoting their efforts to the exploitation only of those few staple products which yielded easy and quick returns. A country which relies so considerably upon the cultivation of one or two products cannot expect to develop on sound permanent lines or to attract a large proportion of immigrants and alien labour. The system of monoculture may benefit a few landholders and capitalists, but it will never insure a race of hardy independent country folk, without whose presence and steadying weight prosperity becomes a mere mass of statistics of imports and exports. The wealth of Brazil depends upon coffee, rubber, and cocoa exports principally, and a fall in prices tends to precipitate a crisis in national affairs. This has been markedly shewn in the coffee industry in the past, but has been remedied to a large extent by the policy known as the "valorisation" of coffee.

The autonomy exercised by the Brazilian states in their

financial affairs is a condition which has considerable bearing upon matters of foreign investment in those states. The obligations consequent upon the raising of money by these local powers are not guaranteed by the federal government, unless specifically so stated, and the Brazilian nation as a whole is not responsible for the integrity of such state operations. This local power has been abused in some cases, and the leading statesmen of the republic have been impressed with the conviction that funds have been raised by local authorities at times in a manner such as must impose a serious strain on their resources, and which might create a position injurious to the credit and even the integrity of the republic as a whole. At the close of 1912 a Bill was brought into the Brazilian parliament whose object was to give the central government powers of vetoing loans contracted abroad without its consent by individual states. A committee of the Senate, whilst it endorsed the necessity for greater control, considered that the measure would be an infringement of autonomous rights, and recommended that the federal government should not assume responsibilities for loans contracted by states or municipalities either in or outside Brazil, which had not the authorisation of Congress; that such loans should not be admitted for quotation on the courses of the country; and that in the event of creditors putting pressure on such states or municipalities with the purpose or pretext of recovering debts the federal government should take steps to secure the integrity of the territory concerned and to maintain the federal republic. The proposals were, however, rejected by the Senate and the power of the states remained unaltered. European investors must protect themselves by recollecting that local loans and emissions are not under the pledge of the republic unless so specially declared, and authorised by Congress, and such emissions should be carefully scrutinised by intending investors when they are offered, and close enquiry made into their intrinsic merits and the financial agencies dealing with them.

Brazil is a land of many handsome cities. Rio de Janeiro, the capital, as approached by sea, presents an attractive

picture, with which few seaports in the world can compare, and which has no rival in the American continents. The sunlit, brilliant sea, studded with emerald isles, is bounded by palm-fringed shores backed with mountains of striking form and colour, clothed with vegetation to the summit in some cases, naked in others. The entrance to the harbour is through a channel a mile in width, so much resembling a river mouth that the early navigators termed it such, or Rio de Janeiro. The harbour itself is one of the finest in the world: a vast oval basin stretching inland for twenty-five miles. Vessels of the largest draught enter, and the anchorage in deep water is extensive enough to accommodate all the navies of the world. Of recent years considerable sums have been spent upon sanitation, harbour improvements, and port works at Rio de Janeiro. Until very recent times Rio suffered from an extremely evil reputation as a fever port, and little more than a decade ago the traveller practically risked his life in passing a single summer night in the city—conditions such as obtained also at Panama or Vera Cruz. But a marked change has been effected by improved sanitation and town planning, shewing again that it is to the negligence of its human occupants rather than to natural conditions that tropical seaports have acquired their ill-fame. The appearance of yellow fever was first recorded in 1849, and epidemics were for many years regularly experienced with terrible mortality. Small-pox, bubonic plague, and malarial fevers have also been serious scourges of the port periodically, but improvement in the habits of the people are tending towards the elimination of these diseases, although much remains to be done.

The city of Rio, formerly consisting in the main of narrow streets, with public and domestic buildings severely plain in appearance, and of solid stone construction, has been greatly modified since the close of the last century. Increasing wealth and population brought a riot of ornamentation in building, fancifully designed edifices in stucco, largely of Italian character, taking the place of the earlier buildings of colonial type. A great deal of money has been spent in laying out public squares, parks, and avenues, and in highly

Photo *Underwood and Underwood*

CENTRAL AVENUE, RIO DE JANEIRO

ornate theatres and glittering pavilions. Early colonial sombreness has given place to modern magnificence, and this wealth of structure seems to manifest itself to some extent as a reaction from earlier times, as of satisfaction that the white man may now live in health where formerly he died of the most appalling diseases. The population of the city has grown rapidly, and numbers nearly a million inhabitants. On the Avenida, one of the principal streets, so greatly has the number of motor cars increased in the city, where seven years ago there was none, that the traffic in these vehicles is at times congested.

Rio de Janeiro is the outlet for a large part of the most productive and most thickly inhabited regions of Brazil, embracing the states of Rio de Janeiro, Minas Geraes, and part of São Paulo, with their exports of coffee, sugar, tobacco, and diamonds. The sugar industry formed the earliest basis of Brazilian wealth. Sugar was the first agricultural product required by Europe from the New World, and to this product Rio de Janeiro owed its first civilisation, and upon its proceeds was established the old colonial metropolis of Rio de Janeiro, which to-day, whilst retaining much of its former picturesque aspect, has developed into one of the most modern centres of Latin American progress. The sugar and coffee of Brazil, if they be more prosaic products than the gold and silver of Peru and Mexico, around whose mines the earliest colonists clustered, have been agents for building up wealth which is more valuable and enduring than the mineral treasures of those lands. Brazil and Argentina have become great centres of food supply, and of prime value to the world in this respect; although the export of sugar from Brazil has decreased greatly since the end of last century.

The Brazilian capital shares the high cost of living common to all Latin American capitals. High rents, high cost of food, clothes, and other matters of everyday life are at once apparent to the foreigner from Europe. Two causes have been assigned to the condition: the high protectional fiscal system, and the scarcity of capital; and both these serve to shew how artificial and forced certain economic conditions of

life are in Latin America, notwithstanding the untouched resource of food and material which exists, and where it might have been supposed that labour and the soil would have produced plenty without the necessary intervention of capital or artificial obstructions of a fiscal nature. The ordinary rate of interest on borrowed capital, on undoubted security, is rarely lower than 10 per cent., and the charge on first mortgage 12 per cent. Rents of houses and shops are high, often due to the fact that houses have been built with money borrowed at high interest. The shopkeeper adjusts his prices accordingly, and with the heavy import duty as concerns foreign foods, the result is in extortionate prices.

Among the cities next in importance to Rio de Janeiro are São Paulo, Manaos, Bahia, Pará, and Recife or Pernambuco. Bahia or Salvador, lying 800 miles to the north of Rio, is the oldest town in the republic, with a population estimated at nearly a quarter of a million. It possesses a sheltered natural harbour, within which expensive port works have been carried out. Sugar refineries and cotton spinning works are among the most important industrial establishments. Foreign commerce is well represented, the largest share of the export trade being in the hands of Germans. Recife or Pernambuco, farther to the north, and Pará and Manaos, the first eighty-six miles from the mouth of the Amazon and the second lying 1,000 miles up the river, are the principal towns of importance in the northern part of Brazil. Pará was founded in 1616, and is the leading city of this region, surpassing Pernambuco and Bahia, and must be regarded as a progressive and enterprising place with nearly 200,000 inhabitants. In matters of municipal improvement, public education, lighting, sanitation, tramway service, and port improvements, Pará is acquiring a high place in the republic, secondary only to Rio de Janeiro and São Paulo. Manaos is the capital of the great state of Amazonas, and is reached in three days by steamer up the river from Pará, a British line connecting Manaos directly with Europe. The city is situated near the confluence of the river Negro, and is the centre for a vast tropical region of

the Amazon basin, including parts of Peru, Bolivia, Colombia, and Venezuela, whose forest products of rubber, cocoa, nuts, oils, tobacco, and many other matters are brought down by a flotilla of river craft of all descriptions. The climate of Manaos is hot, the latitude being but 3° south of the equator, but an eastern breeze tends to cool the tropic temperature. The town of Bello Horizonte deserves special mention. It is situated in the state of Minas Geraes, and was founded by presidential decree less than twenty years ago. The town is laid out upon a plan which was first drawn up on paper, and then transferred to what was a desert site, where palm-trees were the only sign of life; far from the malaria of the forests, and set upon a high, empty plain whence the *bello horizonte*, or beautiful horizon, extends all around, unfolding under the transparent atmosphere and bathed in the healthy air of an exceptionally fine situation.

Of all the numerous cities and towns of Brazil it is impossible to enter into detail here. Many of them bear upon them the stamp of colonial times; some are handsome, others are squalid; some healthy, others fever-stricken. There is a tendency to improvement in most of these municipalities, which is largely aided by foreign capital; and tramways, electric lights, sewerage systems, and water-supplies are multiplying under the stimulus of government bonds, or the promise of dividends.

The railways of Brazil, for a country of so large an area, cannot be considered as more than the beginning of a system which must eventually serve the whole of the massive part of the continent between the tropic of Capricorn and the Amazon. The aggregate length of the railways at the end of 1921 was 17,000 miles, and about one-fifth of this mileage is administered by the state. The building of railways in Brazil has been hampered by two difficult topographical and economic conditions: the chain of plateau-escarpments or mountains which follow the coast in this part of South America, and the widely separated centres of population, which exist in detached sections along the coast with extense, sparsely settled areas between them. Rio de Janeiro and

Santos are the only cities or ports which are backed by a rich, well-populated country, and from these centres a network of railway lines extends, reaching back into the interior, with long lines forming portions of possible or future transcontinental systems. Many of the seaports on the long coast line north of Rio de Janeiro are small and difficult of access from the sea, but in most cases are united by the railway system.

The railways of Brazil may be divided geographically into three principal groups: the northern, central, and southern, the central being the most important. These groups are, or in the near future will be linked into one system. The northern group will extend, when connections are made, from San Luis on the northern coast of Brazil, capital of the state of Maranhao, to Bahia, with branch lines at nine different points to the seaports of San Luis, Camocin, Fortaleza, Natal, Cabedello, Pernambuco, Maceio, Aracaju, and San Salvador, all lying upon the stretch of coast which, more than 1,200 miles long, forms the eastern-most projecting angle of South America. Nearly all these ports lack wharf or quay accommodation for vessels; but at Bahia and Pernambuco elaborate harbour works are under construction. The Trunk system of the northern railway group is that of the Great Western of Brazil Railway Company, from Natal to Maceio, with branch lines inland, the longest of which extends towards the Fortaleza line. From Bahia railway work is also being carried out, which will provide increased means of communication within the state of Pernambuco.

The central group of railways connected with the northern group by the coast line, includes the important systems known as the "Central of Brazil," the "Leopoldina," the "Paulista," the "Mogyana," the "Sorocabana," and the "São Paulo"; serving the states of Espirito Santo, Minas Geraes, Rio de Janeiro, São Paulo and Paranã, with extensions into Goyaz, Matto Grosso, and Santa Catharina. The seaports served and linked together by this group are Victoria, São Joac da Barra, Macahé, Rio de Janeiro, Santos, and Paranagua. The capital and seaport of Rio

de Janeiro is the centre of this group of important railways, and its quays are served directly by the Central of Brazil and the Leopoldina systems. The branches of the Leopoldina railway run to the north-east and form part of the north-to-south network. The Central reaches out north-westwardly into the interior, and southwardly follows the coast to São Paulo, the famous coffee-producing centre; embodying some 1,300 miles of railway. This important line is among those controlled by the government, and is administered by the Department of Public Works; and whilst its working regimen is comparable with that of other lines, the financial results are unfavourable. The railway unfortunately loses in character as being the subject of political machinations. The Central line controls a large suburban traffic The journey of slightly under 210 miles from Rio de Janeiro to São Paulo takes twelve hours, which compares well with the other Brazilian lines. In the construction of this railway serious obstacles were overcome, due to the topography of the region, which necessitated traversing the coast range and gave rise to heavy gradients and switch-backs; the elevation surmounted being nearly 4,500 feet above sea level. The scenic value of the line is very marked, the route being an extremely picturesque one. The harbour of Santos, the port for the state and city of São Paulo, is only somewhat less in importance than that of Rio de Janeiro in point of shipping and the ingress and egress of mercantile tonnage; and the improvements effected in the docks and sanitation of recent years have remedied the inadequate conditions of loading and wharfage which formerly existed. The serious mortality of but a few years ago has been eliminated as a result of these improvements: and from a pestilence-ridden relic of colonial times, Santos has become a well-laid-out and comparatively healthy city, mainly as a result of the work of the Santos Dock Company. The São Paulo railway is a British-managed line, prosperous and important, forming the outlet to the rich state of that name. From this railway system, a line reaches out to Corumba in the state of Matto Grosso, on the border of Bolivia, and more than 800 miles from the port of Santos,

and will tend to bring under development an enormous area of at present desolate territory. Access commercially between these two points has been over a route 3,000 miles long, by means of the River Plate and the Paraná and Paraguay rivers. The huge state of Matto Grosso has suffered from lack of railway outlet for its products, as has also the portion of Bolivia which will be served by the line. The region traversed includes large areas of Para rubber-forests, as well as the temperate highlands of Matto Grosso. The line is designed ultimately to connect with the railway systems of Bolivia and Peru, thus forming a transcontinental route to the Pacific coast; more than 1,100 miles north of the Trans-Andean line from Buenos Ayres to Valparaiso. A further important line of the Central group is that to Curitaba, the capital of the state of Parana; and this and the Sorocabana railway are controlled by a Canadian company, which also finances the electric light and power systems of Rio de Janeiro, São Paulo and Bahia. To the south of Santos is the port of San Francisco, which, although at present a mere village, possesses one of the finest harbours on the coast, and is the terminus of a new line which reaches Asuncion, the capital of Paraguay; so giving that republic a direct outlet to the coast. This railway is a work of extreme importance to that part of South America, as the republic of Paraguay provides a field for immigration and commercial development which has remained obscure due to its remote situation.

The third group of railways is that existing principally in the state of Rio Grande do Sul, and the connecting link with the Central group through the state of Santa Catharina. South of this network is the railway system of the republic of Uruguay: the joining of this with the Brazilian system and with that of Argentina will complete the great network which extends to Bolivia and Chile. The connection of the Southern Brazilian system with the Central Uruguay Northern Extension, thus rendering possible through traffic between Rio de Janeiro and Montevideo, was one of the greatest evidences of railway activity in South America at the present time.

The Brazilian railways, as regards their administration and maintenance, are grouped under several headings: government lines, administered by the state or leased to private parties; private lines with national interest guarantees, and without such guarantees; and private and state lines operated under state concessions with and without interest guarantees. The tendency of the government policy is to lease its lines. The railways are of varying gauges. The Central of Brazil, from Rio de Janeiro to São Paulo and northward into Minas Geraes, which forms the great government trunk line, is of sixty-three inches gauge, and was built during the years 1858 to 1864. The São Paulo and Paulista, principal trunk lines, are also broad gauge, with narrow gauge-feeders and extensions. Some of the smaller lines in north and south Brazil were built from political considerations, and guarantees of interest upon their cost, payable under the railway law of 1853 to their British constructing companies, heavily burdened the national treasury; and they were afterwards purchased by the state and have been leased.

The four principal railway companies in Brazil in which British investors are interested, and whose shares are quoted on the London Stock Exchange, are the Leopoldina, the Great Western, the Great Southern, and the São Paulo. The total mileage of these four lines is approximately 2,800 miles, and there are some 2,000 miles under construction or projected by British interests. The total capital is represented by nearly £23,000,000 sterling in debentures and shares.

There are vast areas of land in Brazil still available, in some cases at almost nominal prices: opportunities for the foreigner or national which in the future are not likely to remain. Thus, in certain states land prices are from 600 reis to 10 or 20 milreis per hectare (=2½ acres). In 1921, with the milreis worth tenpence (par value 27d.), the possibility of obtaining landed estates capable of producing many commodities of value, even if in at present remote districts, was certainly alluring, and the prospect remains attractive.

Although the number of tide-water river channels and inlets on the coast of Brazil is large, those which are really

serviceable as harbours do not number more than about twelve; reefs, sand-bars, and shoals rendering many of the others practically useless. Heavy expenditure has been necessary in creating good port facilities at Rio de Janeiro, Santos, and Manaos, the cost being met by an additional tax on merchandise. Among the natural harbours is that of Maceio. For a country whose populated centres are separated by such vast distances of coast or river, Brazil is seriously deficient in steamship lines. The coasting trade is confined by law to national vessels, or foreign vessels under the Brazilian flag, with a certain proportion of native crew; the object being to create a national merchant marine. But the Brazilians are not a maritime people, which is a serious obstacle to the purpose. On the Brazilian rivers subsidised lines of steamers run, an English corporation serving the Amazon and its main tributaries; and the Lloyd Brazilian line sends steamers regularly from Rio northwards to Pará and Manaos, and southwardly to Montevideo. Heavily subsidised lines of steamers ascend the Paraná and Paraguay rivers to Corumba and Cuyaba, in the state of Matto Grosso, above Asuncion, and there are also subsidised steamers on the San Francisco river, the great northward-flowing stream which debouches near the north-east angle of the South American continent at Sergipe. This waterway is interrupted by the Paulo Affonso falls, but is navigated above, for 850 miles to Piraporo.

The most important element in Brazil is the production of coffee. Coffee in Brazil is an instance of an enormous industry carried on with a single product, as in the case of the cattle or the wheat of Argentina. The coffee-shrub was first introduced into South America by the Dutch, who sent it in 1718 from Amsterdam to Surinam, whence it spread through the American tropics, but it was of comparatively recent times that its cultivation acquired such vast importance in Brazil. Nearly all parts of Brazil are capable of producing coffee, but the production has mainly been confined to a comparatively small belt formed by the four states of Espirito Santo, Minas Geraes, Rio de Janeiro, and São Paulo, although the other states produce coffee in small degree.

São Paulo is the greatest and most famous centre of coffee production in the world, and as a result the state is the wealthiest and most populous of any in Brazil, coffee forming the principal source of its wealth : and is, in effect, the basis of a special area of South American civilisation. The surface of this particular state contains 102,300 square miles of land, and it has a population of nearly 3,800,000 people, thus having the greatest density to the square mile of any region in the republic. Yet barely a quarter of it is under cultivation. The state of São Paulo lies upon the southern coast of Brazil, and the important network of railways which serves it has its outlet at the port of Santos. The state supplies more than half the world's output of coffee, the yield having increased from 103,000 bags in 1850 to more than 12,250,000 bags in 1910. The area planted with coffee of 2,250,000 acres contains, it is estimated, more than 6,750,000 trees. Some of the estates are 25,000 to 50,000 acres in extent, and represent a large investment of capital : the drying-plots for the berries or coffee-beans occupy thousands of square yards in area, and the product is transported from the plantation by waterways and light railways : the largest estates are practically complete settlements, with their own schools and other matters of community life ; and electric power is largely utilised for actuating the machinery and for lighting. In harvesting the coffee the entire families of the plantation labourer, including men, women, and children, are employed.

Thus the rise and growth of the coffee-producing industry in São Paulo is of much interest, and reveals a local civilisation practically founded upon the cultivation of an exotic shrub. The decomposed lavas of certain portions of the state, which have formed a deep, rich soil, are called by the Paulistas " red earth," and upon these limited areas of diabasic soils the valuable agricultural industry was earliest concentrated. In the year 1885 a great coffee-planting mania came to being, and continued for fifteen years. For thirty years previous coffee-planting had made normal progress, but the sudden expansion absorbed the thoughts and energies of all : rich and poor, city people and farmers.

Other forms of agriculture, such as the cultivation of sugar-cane, cotton, and cereals, were neglected, and a systematic search followed for the famous " red earth " deposits, which experience had shown was that in which the coffee flourished. The shrub in that region grows best at an elevation of 1,800 to 2,500 feet above sea level, where frosts do not occur ; and certain well-defined upland belts became settled with coffee-growers, whose *fazendas* or plantations appeared rapidly on every hand ; and the forests receded before axe and fire to be replaced by the coffee-shrub. New centres of population followed, small towns of a cosmopolitan character, including Orientals, Arabs, and Syrians—those inveterate small traders for whose petty buying and selling no corner of Latin America seems too remote. São Paulo became the home of perhaps the most assorted mixture of agriculturists of different races that has existed in any part of the world. The capital of the state, the city of São Paulo, became an important commerical centre, its prosperity being entirely founded upon the coffee industry, which, as described, followed upon the discovery of this peculiar red volcano soil upon the plateau of eastern Brazil. The city and state of São Paulo are closely united in their efforts to sustain the prosperity of the industry, and it may be said that their literature, economics, government and all use, are bound up with and influenced thereby ; and coffee, its cultivation, production, sale, and shipment almost form the science and religion of the rich state of São Paulo.

The proportion of foreigners in the population is higher in São Paulo than in Rio de Janeiro, and the state absorbs a large flow of immigrants, of whom, numbering 900,000, Italians predominate, and among whom are 5,000 owners of coffee plantations of an aggregate value of £4,000,000. Since the abolition of slavery, the question of labour on the *fazendas* has been the most vital one for that state. São Paulo, the capital of the state, is a handsome city with upwards of 350,000 inhabitants, and ranks second in the republic ; and its public buildings, parks, avenues, and the handsome dwellings of the wealthy coffee-growers are evidences of the prosperity of the industry ; and the

educational system in the schools of the capital is the best in the country. For the purpose of encouraging colonisation in the territory the state government offers various inducements, some of an attractive nature, to European emigrants, but the fluctuation of labour is shown by the fact that in 1912, 103,000 immigrants entered the state and 40,000 emigrants left it, through the port of Santos.

The outlet for the coffee industry is the seaport of Santos, the greatest coffee-exporting centre in the world. Santos was, until very recently, as fever-stricken and unsanitary a place as Rio, but new systems of sanitation and drainage, and the improved docks and embankment of the water-front, have served to remedy the condition and redeem the evil reputation of what was one of the deadliest of the world's seaports. The exports of coffee from Santos represent nearly the whole of the produce of the republic; the total of the export of coffee in 1919 reaching a value of nearly £73,000,000 sterling. In the state of São Paulo the largest coffee estate owner in the world exists: a German colonist, whose property embraces thirty-one plantations with an aggregate area of more than 80,000 acres, and a yearly output of 10,500 tons of coffee-berry per annum. From wealth acquired from coffee a fortune of £5,000,000 was recently left by a Brazilian millionaire, largely in coffee plantations and shares in the Santos Docks.

Injury has been done to Brazil and other coffee-producing countries by reason of the adulteration of coffee in Europe and the United States. The Brazilian government has made efforts to improve the brands sold in foreign markets, and to augment the consumption of coffee. The adulteration of coffee in London and in Germany is partly responsible for the low and almost stationary consumption, the true virtue of the beverage failing to reach the people in great measure. This adulteration has reached an average, it is stated, of 40 per cent. The consumption of coffee in Great Britain is the lowest in the world, being only about 1 lb. per head per annum, as against 12 lbs. for the United States and 15 lbs. for Holland.

The policy known as the valorisation of coffee was

inaugurated by the state government of São Paulo, and was brought about by the threatened ruin of the planters due to low prices following on a number of years of extremely good harvests. Under it the purchase of coffee by the state was legalised, the object being to prevent the crop, in times of abundant harvests, from being put upon the market until demand should warrant it; thus keeping up the price of the commodity. This policy has been greatly criticised, but its daring principle has met with success. It embodied a new form of "protection," by which a government intervened in an agricultural industry, and bought at its own expense enormous quantities of coffee to be held in reserve. The great loan of £15,000,000 sterling which was placed with foreign bankers for the purpose has regularly received its due interest and amortisation, and has been reduced, in 1912, to £4,000,000. The accumulated stock of coffee was held in Europe and the United States, and gradually unloaded as better prices prevailed. A security of 7,000,000 bags of coffee was handed over for the loan, and surtax of five francs per bag imposed to cover the interest. At the close of 1912 there was some clash with the United States government, in connection with the laws enacted at Washington against Trusts, which it was held were violated under the valorisation arrangements, by reason of stocks held in that country. These stocks were dispersed as a result.

Following upon the cultivation of coffee, cotton-growing and the manufacture of the cheaper kinds of textile fabrics form the most important industries of Brazil. It is estimated that one-third of the total industrial capital of the country is invested in the cotton mills, a sum amounting to £16,000,000 sterling, and the industry is one of the most prosperous in the republic. The mills are capable of consuming all the raw cotton produced on the plantations, and they would do so were it not that, due to the topographical configuration of the country, the export of raw cotton from certain districts is more profitable than its carriage to the mills. Every state possesses cotton-fields and mills, but the latter are principally concentrated in the states of São Paulo and Rio de Janeiro. The yield of cotton varies from 1,500

to 3,000 kilogrammes per hectare, which compares favourably with the 900 to 1,000 kilos per hectare of the United States, according to Brazilian figures.

The cotton mills generally pay a substantial profit upon their invested capital, the industry having been fostered and maintained largely by the aid of high tariff rates upon imported cotton goods. It is estimated that there are 240 mills, with a total production of 500,000,000 metres of textiles. The quantity of raw cotton exported from the country and the import of cotton fabrics have both been steadily declining with the development of the home industry, which from a disinterested economic standpoint may be regarded with satisfaction, as tending towards the natural condition of the supplying of its own wants by the community, rather than depending, either for sale or purchase, upon foreign countries. In some cases however, protection has been overdone, and the weaving mills which use imported yarns have suffered. The various states in some instances have exercised their right to assist local mills by state legislation, in addition to the national tariff. Notwithstanding high tariffs, and the development of the home industries aided thereby, Brazil still imports large quantities of cotton goods of the superior kinds, which the native mills cannot produce. The advance in manufacture has been principally in the plainer and coarser fabrics which form the dress of the poorer classes. The fuel consumption of the mills is supplied by imported coal, which costs at São Paulo over £2 per ton. Freights on the cotton from the northern states are high, which is an added expense, and a duty for purposes of revenue also exists upon the raw material. Cheap labour, home-grown raw material, and plenty of available capital, however, ensure profits upon the industry. The earnings upon capital are from 6 to 8, 10, and 12 per cent., but due to a difference in the value of the milreis since some of the most important mills were established, the shareholders reap from 15 to 30 per cent. on their original investments.

The purchase of textile machinery, mainly from Great Britain, is very considerable. The mills are often well-

designed and equipped, generally following a one-storey plan, land being cheap: which is an advantage in certain respects over the Lancashire system: and hydraulic and electric power are largely used. The factory operatives work for ten hours daily, but it is estimated that twice as many hands are required in a Brazilian as in a Lancashire mill. The constant addition of new mills may be expected to consume the whole of the native product of raw cotton. A great deal of the cotton is grown by small farmers without any particular capital, in a haphazard way, with other crops, and sold to the mills: and this branch of agriculture, it may be said, is a "poor man's industry" in part, which is not the case with coffee planting.

Cotton is a native product of the New World. Cortés found the Aztecs and kindred tribes wearing armour of quilted cotton, which, whilst it did not resist bullets, offered protection from arrows and spears. In the Amazon valley the early explorer, Orellana, and others, found the Indians wearing *cushmas* or cotton shirts, and small plantations of cotton were observed around their settlements. In 1770 the Portuguese government ordered the Viceroy of the Indies to take steps to introduce improvements in spinning and weaving into the flourishing colony of Brazil. Weavers arrived, and calico factories were established and certain coarse kinds of material were obliged to be manufactured. In 1809 all kinds of cotton goods were permitted to be made, but in the next year the imperial permission was withheld by reason of a treaty between Portugal and Great Britain. In 1846 the restrictions were withdrawn and protective measures established, but only nine factories came into being, with, however, a considerable export. In 1874, due to the American Civil War, 78,000 tons were exported from the mills of Brazil, but later the industry fell into decay, from which at the present time it is recovering. The product of cotton in 1918 was 140,000 tons, and the value of the export for 1920 nearly £5,500,000.

Large quantities of rice are consumed in Brazil, but the imports have declined owing to home cultivation and local initiative, which is now ousting the foreign product. The

cultivation is increasing to such an extent that Brazil may begin to export rice instead of importing it.

The plantations of Brazil lead in supplying the world with cocoa, the product of the republic amounting to more than 50 per cent. of the world's output. The moist, warm regions are admirably adapted to the cultivation of the *cacao* bean, of which 54,000 tons were exported in 1920.

The tobacco grown is mainly consumed in the country itself, and figures of export give but little clue to the importance of its production. The best qualities of the Bahia leaf are regarded as the equal of the Cuban in flavour, and the state enjoys a considerable revenue therefrom. Nearly all the Brazilian export of tobacco is taken by Hamburg and Bremen. In 1920 the export was 31,500 tons.

Sugar was formerly, and might again be, under better labour conditions, one of the foremost of Brazilian products. During colonial times sugar-cane was cultivated from Paratizba in the north-east to Santos in the south, and sugar production was the principal industry and the foundation of Brazil's wealth and civilisation, and with Brazil-wood was the principal export to Portugal. Before the middle of last century sugar was supplanted in importance by coffee. At present the sugar-cane is cultivated in three zones, of which the northern, with the state of Pernambuco as its centre, is the most important.

At the present time the best results are obtained from the Selangor variety of cane, which grows to 6½ feet in height, with an average diameter of 1½ inches, the average duration from the same stubble being three years. The cane is planted in July, August, and September, and cut from September to March. The soil in this region is a dark, sandy loam or clay, so rich in vegetable humus that little fertilisation has been necessary, and no artificial irrigation is required. The cost of production averaged from 4 to 5 milreis, or 5s. 4d. to 6s. 8d. per tone of cane, and the cost of working about 2s. 8d. The average yield of sugar from the Pernambuco cane is 65 tons per hectare, or 2½ acres. The plantations are generally supplied with light, narrow-gauge railways and tramways, which transport the cane to the

mill, some of the lines being from 10 to 40 miles in length, with engines weighing from 8 to 20 tons, and cars of 5-ton capacity. The lines and rolling stock come almost entirely from England and Germany. The German cars are 25 per cent. cheaper than the English, and are much more numerous than the latter. The fields are fenced with barbed wire, 90 per cent. of which is of United States origin, and all the ploughs used in cultivation are from the same source. The factories are nearly all equipped with British machinery, generally of a very old type. In the vicinity of Pernambuco there are some sixty sugar mills, some of a large capacity, sugar being made by the same process as that of the United States. In addition to the larger mills, with their vacuum-pans, crystallisers, and centrifugals, there are many small, open-boiling plants, producing white, yellow, and third-class sugars with primitive appliances. All the sugars produced in this region are bought by local commission agents and sent to Rio de Janeiro or to England to be refined. Sugar is also largely grown in many of the other states. The exports of sugar from Brazil in 1910 were about 58,000 tons, and in 1920 109,000 tons, of a value of £6,147,000.

A peculiar product of the central part of South America is the well-known *yerba mate* or Paraguayan tea, large quantities of which are produced in Brazil, the exports for the year 1920 having reached nearly 90,000 tons. This product is described in dealing with Paraguay. The numerous vegetable and forestal products of Brazil are of much value and interest, and some idea of their importance will be gathered from the table of exports shown elsewhere.

The staple article of diet in Brazil is the mandioca. When, in 1500, the Portuguese first set foot in Brazil, they found that the aboriginal Guaranis and Tupinambás depended for their daily bread, not upon corn, whose absence caused the discoverers surprise, but upon a certain root which they cultivated, and called "mandioca." One of the first Jesuits learned from the natives that its use was first taught them by the god Zomé, according to native legends, during a period of famine, and although he naturally

disregarded their simple mythology, he was at a loss how better to explain their discovery of the utility of the root, which in its wild state is not only woody and fibrous, but is, in addition, so poisonous as to cause death to the animal which may eat it. Nevertheless, the Guaranis, by careful and prolonged cultivation, coaxed the fibrous root to swell into tubers, destroyed the poison by the application of heat, and using much the same method as obtains to-day, produced both the well-known tapioca and the little-known "farinha de mandioca," which is to most Brazilians what bread is to the European or American. The mandioca, which corresponds to the cassava of other countries, grows wild throughout Brazil; generally it is a shrub some 4 feet in height, which, when cultivated, develops on its roots tubers of various shapes and sizes. The farinha is made for home consumption by the ancient process of washing, pulverising, and squeezing the root to express the juice, and then by grinding and roasting. The best quality of farinha has the consistency of coarse, whitish sawdust after the process, and is agreeable and nutritious, but the inferior kind, which is that forming the food of the poorer classes, is in the form of brownish lumps, much less inviting and wholesome. An acre of land of good farinha, it is calculated, yields the equivalent in food value to six acres of corn, with much less labour. The export of the tapioca might be largely increased.

The mining industries and mineral exports of Brazil are very small for a country of so vast an area. The gold production of the state of Minas Geraes and other parts of the republic, which in centuries past produced considerable supplies, has diminished greatly. Abandoned placer mines are exceedingly plentiful in certain districts of the unsettled interior. Diamond mining early acquired considerable importance, and diamonds have been exported from Brazil since 1727. The state of Minas was a famous centre of production, and it has been estimated that stones to the value of £12,000,000 have been taken from the diamond fields since that period. The states of Matto Grosso, Goyaz, and Bahia, are the principal centres of diamond mining,

but the industry has suffered since the advent of mining in South Africa. The black diamond of Brazil is largely used for diamond drills.

The iron ores of Brazil have not received adequate attention, due to difficulties of transport and lack of enterprise and expert knowledge. As early as 1629 one or two small forges were constructed in the vicinity of the ore deposits, and probably represented the first attempts at ironworking in the whole of America. Of the several known deposits of importance one occurs near the Central Railway of Brazil, and the claim has been made that enormous quantities of payable ore can be recovered, and estimates of thousands of millions of tons as existing in one portion of the district alone ; a large proportion of which carries 50 per cent. of iron. That the basis of a great iron-foundry industry exists in the Brazilian highlands is regarded as an established fact : but it remains to be seen how far the available coal deposits of Brazil could be of service in the industry.

Recently possibilities of the exportation of the iron deposits of Minas Geraes have been studied by London capitalists with a view of the mining and exportation of the ore ; as a result of which it has been determined that ores carrying 60 per cent. iron can be shipped in great quantities. From the standpoint of national benefit the fabrication of iron and steel in the country itself would seem more advisable : and native and foreign capital with skilled labour from abroad might demonstrate the possibilities of the field. The home demand is estimated at some 250,000 tons annually of iron and steel. The increase in railway building calls for large quantities of rails, and other public works require cast and rolled iron and steel in other forms in increasing amounts. Furthermore, a successfully established steel plant, it might be expected, could extend its business to the neighbouring republics, as far as facilities of transport permitted. Other deposits of iron exist in the states of Rio de Janeiro and Espirito Santo, which may prove of commercial value in the future. The Serra do Espinhaço, bounding the valley of the San Francisco river on the east, contains excellent deposits of iron ore, with some gold in conjunction with it,

and many years ago governmental efforts were made, by the introduction of craftsmen, and the establishing of a town and forges, to create a home industry of iron production. The same district is famous for its gold ores.

Coal of commercial value exists in Rio Grande do Sul and Santa Catherina, but the development of the deposits has been slow. It is not first class coal, but nevertheless can be rendered into a valuable marketable commodity.

A further and peculiar mineral resource of Brazil is the monazite sand found on the coast, which of late years has acquired considerable commercial value.

In connection with the mineral deposits and their exploitation in general, one of the principal requirements of Brazil is a geological survey. Copper, lead, nickel, manganese, platinum, mercury, zinc, wolfram, bismuth, and tin are also found and in some cases worked. Copper smelting furnaces exist, and copper matte is exported. Marble and lime are abundant, and there are many varieties of mineral waters, some of which are bottled for consumption.

The two best-known gold mines of Brazil are the St. John del Rey and the Ouro Preto, both under British control. The St. John del Rey mine at Morro Velho yielded, in the year 1912, 196,300 tons of ore, giving a value of gold and silver of £443,000 ; the largest amount obtained since the enterprise was started, in 1834. Much of the mineral is being extracted from a depth of nearly 5,000 feet ; the mine being the deepest in the world. The yield of the ore was nearly 46s. per ton, giving a profit of nearly £141,000 on the year's operations, an increase over the previous years. For the year 1920, 146,800 tons were crushed, yielding £550,000, the highest ever obtained: costs 48s. per ton: profit, £168,000, a record; dividend ten per cent.—for the tenth consecutive year. The mine is now artificially cooled. There appear to be still large reserves of ore in this famous old mine. The Ouro Preto, though of less importance, maintains its stability.

The slow development of the mining industry in Brazil is due to the difficulty of obtaining mining rights where the owners of the land are concerned, as by the law of inheritance

this is divided and subdivided among descendants, giving rise to complications, and exaggerated claims when purchase is to be effected; for the value of a mine, in the view of a Latin American owner, rises enormously if a foreign prospector or miner makes an offer for the property. As the law-makers of the country are also the landholders, improvement is slow, but there are efforts of late to adopt the excellent codes such as in Mexico and Peru assign all mineral rights to the state. The cost of labour in Brazilian mines is also a barrier: as well as that of transport. Brazil, moreover, is in general an expensive country to live in. The Brazilian is a good miner if reared to the work from his youth, but he is a bad time-keeper. In the country the worker is not ambitious: he often has a small plot of maize and other food products, which he attends in the intervals of mining, or is often content to live by gold-panning in the rivers. Italian and Spanish labour is good, but generally prefers coffee-planting. The St. John del Rey Company endeavoured to import Chinese when those left the Rand, but some Japanese have been imported at government cost, and as Japan seeks a field for emigration in Brazil this class of labour may increase. Colonies of Japanese have been established in agricultural pursuits—net, silk, cereals, etc. The British mining companies maintain staffs of doctors and equipment to contend against climatic difficulties, at a considerable cost, especially at Morro Velho, and have done a good deal to improve the condition of life in this respect. On the whole the climate is good, the extreme range of temperature at Morro Velho being 56° to 82° F., but tuberculosis, typhoid, and other diseases are encouraged by the native method of living.

In spite of the lack of inducement in the past to invest foreign capital in undertakings in Brazil it is remarkable how much money has been sunk and irretrievably lost in gold mines in the last twenty-five years. The loss is chiefly due to the capital outlay which has to be expended before work can be started, and the heavy working cost per ton of mineral as compared with other countries. In the state of Minas Geraes alone, of nine large mines started with a capital

outlay of £1,250,000, several are in active exploitation, whilst the outlay of the remainder has been lost, the result chiefly of the burdens connected with transport and taxation.* Gold pays a state export tax of 3½ per cent., manganese and iron ore of 3 per cent., which cannot be considered exorbitant.

A natural asset of Brazil, which under development will prove of value, is the water-power derivable from the rapid-flowing rivers in certain parts of the republic. The numerous cataracts and the consequent rapid change of level provides a head of water under favourable economical conditions. Some of these sources of power have been utilised, notably in the states of São Paulo and Rio de Janeiro, where four hydro-electric installations furnish some 63,000 horse power. One of the largest cataracts is the Paulo Affaiso falls, upon the San Francisco river, at a point about 190 miles from its mouth, in the state of São Paulo. This great cataract, with a difference of level of nearly 400 feet, rivals Niagara, both in altitude and volume, and is regarded in some respects as being more striking in appearance. Upon the Paraná river are the remarkable Guayra Falls, over which passes a volume of 18,000 cubic metres of water per second, and the roar of the cataract can be heard nearly twenty miles away. The three republics of Paraguay, Argentina and Brazil meet upon the Paraná river, in a region of great fertility and beauty. The falls of Iguazu, situated at this point, are a notable feature of the river, and are among the largest of the world's cataracts, being 210 feet high, as compared with the 164 feet of Niagara. Amid a tropical setting of giant trees, orchids and the trailing forest creepers, the haunt of brilliant plumaged birds and butterflies, the falls are of much beauty. The forests in this region produce valuable cedar and hardwoods, which are floated down the Alto Paraná to Corrientes in rafts, and an increasing business is done therewith. Sugar cane, maize, bananas, mandioca, and other useful food products flourish where the forest is cleared. Water-power is capable of development upon the river to a considerable extent.

* Foreign Office report.

There are at present no large or exclusively manufacturing districts in Brazil, as in Britain, Germany or the United States; industries being generally greatly scattered, with small factories in straggling hamlets which supply local wants, and which cannot extend their operations due to lack of means of transport. Somewhat similar conditions obtain with regard to food products, a variety of which are grown in every region. Thus, in São Paulo, or Pernambuco, in the neighbourhood of the coffee and sugar plantations, maize, manioc, and other foods are cultivated. Manioc or cassava is the chief food of the labouring classes. Each village, and often each family, has its fields. There is but little interchange, and the country in this respect may be regarded as a collection of numerous small isolated markets, independent of each other and more or less self-supporting. This condition is generally deplored, but it is open to question if it has not or may not in the future have some desirable economic attributes, in tending to make such localities self-supporting. In the state of San Paulo, however, the rise of manufacture has been marked; industries of various kinds having developed in the last thirty years. At the present time there exist more than 300 factories of importance, representing a combined capital of £10,000,000, whose aggregate output is calculated at £12,000,000 per annum, and which give employment to over 30,000 workpeople. Principal among these are the cotton factories, thirty-four in number, with a capital of £3,110,000 and an annual production of over 100,000,000 yards of cotton goods, employing many thousands of hands: breweries, fifty-two in number with a capital and output respectively of £1,123,000 and £1,233,000: iron foundries, thirty-eight in number, thirteen sugar factories, twenty-two furniture factories, thirty-seven building societies, fifteen hat factories, twenty-seven chemical works, followed by a lesser number of flour, jute, woollen, paper, match, food, boot, glassware, leather, tobacco, and other factories and mills, revealing the growing industrial activity in manufacture of this progressive state. The imports from Great Britain into the state amounted annually to a value of more than

£3,000,000, principally in railway material, machinery, cotton goods and coal. The imports from Italy were of more than a million pounds value, showing the relations kept up between the Italian settlers and the motherland.

The advisability of a wider distribution of food products is being recognised in Brazil, and the Department of Agriculture has begun to develop a policy of policulture, as supplementary to monoculture, especially in the state of São Paulo, and congresses and co-operative societies have been organised and lectures and practical demonstrations given and seed distributed. The state has granted a subsidy of 6 per cent. per annum upon a capital of £4,000,000 pounds for the working of a land bank, established in the capital, with some twenty branches in the principal towns, the object being to advance money on real estate and on produce warrants, at interest not exceeding 7 per cent. per annum. This has been of value to the cultivators, who formerly were obliged to pay 12 to 18 per cent on borrowed funds. A Forestry Department has also been organised, with the object of conserving the forests and planting new timber. A law was passed in 1902 penalising the further planting of coffee, which has resulted in greater care and attention being bestowed upon the existing *fazendas*, and has encouraged the cultivation of other products. The matter of increased rice cultivation—which went out at the time of the rise of coffee—is of importance to the state. Some thousands of Japanese are being imported to cultivate rice in the damp coastlands south of Santos. There are 130 rice mills in the state, and this and the cotton industry increase rapidly. These benefits brought about in the state of São Paulo may be the forerunners of improvements in other states.

As regards the pastoral industries, the vast plains and great plateaux of the temperate or sub-tropical states of Brazil afford unlimited field, but these fail to meet the requirements of the country's development. Quantities of jerked beef, or "Charqui," were formerly imported from Argentina and Uruguay, but there is now an export, together with (1920) 61,000 tons of chilled meat and 37,000 tons of hides. In the state of Rio de Janeiro the herds are

increasing, and in Minas Geraes dairy products are engaging attention, as well as the raising of beef. Cattle-raising in Matto Grosso is hampered at present by the lack of accessible markets. The former considerable cattle-breeding industry of Bahia has suffered by reason of long and growing droughts. In Rio Grande do Sul the jerked beef industry has attained the greatest development, and nearly half a million beeves are slaughtered annually to supply it. Sheep-raising has received but little attention, but there is an export of wool from some of the Atlantic states.

The *gaucho* of Brazil, and the corresponding region of the vast pasture-lands shared by Argentina, Uruguay and Paraguay, is the principal representative of a type of what was exemplified in western North America by the cow-boy—but of another race. The *gaucho* is a picturesque and almost romantic figure, a product of environment and tradition, a creature of his kind rather than of any particular nationality. From his earliest boyhood he is accustomed to be astride a horse's back ; even as a youthful diversion : with a rawhide thong in lieu of bridle, and a saddle consisting merely of a strip of sheepskin and a cinch. The professional *gaucho* of the state of Rio Grande do Sul is an expert horseman, expert also with his lasso and the " boliadeira " ; the latter implement consisting in a thong and two balls, which, thrown unerringly, winds round a fleeing animal's legs and brings it to the ground. This species of lasso is peculiar to the South American cattle-man, and is unknown to the Mexican *vaquero*, who in his turn is no less expert with horse and *reata*, or lasso, than the *gaucho*. The *gaucho* is trained to be devoid of fear ; a charging bull, coming at him from the herd with purposeful fury, is calmly awaited, and received with blows across the muzzle from a short whip, the only weapon, and retires worsted. Such encounters, which are elsewhere tricks of the experienced *torero* or bull fighters in the arena, are matters of everyday routine with the *gaucho* of Brazil. He prides himself on his dexterity, like his brother of Mexico, and if his horse falls amid a stampeding herd of cattle, he is quick to avoid

the trampling hoofs, which for another would mean instant death, and to remount. In the remote prairie, for his single daily meal, the *gaucho* lassoes a steer, brings it to the ground, kills it and cuts off a portion of hide with flesh and lays it on the embers of his camp fire to cook it; and eats it with farinha, washed down with water, or often wine or aguardiente. Then follows the customary *maté*, taken hot, and a bed formed of a poncho and saddle-cloths. The life on the *estancias*, or cattle ranges, has the compensation for the *gaucho* of activity and independence, in which he revels. It is hard, but the work is not necessarily laborious. The estancieros, or range-owners, do little more than leave the cattle to multiply on the natural pasture, and the beasts practically take care of themselves. Fattening cattle gives comparatively little work, except that of fencing off an area of ground for them. The ticks and insect pests work their will on the herd until the frost kills them; the old hay is burned off the ground to make way for the new crop, and occasionally some salt is thrown to the cattle, which at the end of the winter are all bought on the ground by the buyer from the "charqui" factory, or *saladero*, whether good or bad, fat or lean. The *gaucho* lives in his hut on some hillock of the prairie, and will not dwell in the town, even if his profession permitted such. His wide-brimmed felt hat, silken or woollen poncho, huge silk neck-handkerchief and leather belt, adorned with silver coins; his raw hide boots and enormous silver spurs and other trappings, are for him the habiliments he desires, and in any other environment he would languish. Work, feasting, maté drinking, gambling, and fighting; these are his pastimes, and no ornate palace of modern Rio de Janeiro would ever tempt him to abandon them.

The following list shows the principal Brazilian exported articles for 1918–20; values in thousands of pounds sterling, f.o.b. Brazil. These are from figures furnished officially.

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EXPORTS OF THE TEN CHIEF ARTICLES

DURING THE PERIOD 1916–1920

ARTICLES	UNITS	QUANTITIES					VALUE IN THOUSANDS OF POUNDS STERLING				
		1916	1917	1918	1919	1920	1916	1917	1918	1919	1920
Cotton ..	Tons	1,071	5,941	2,594	12,153	24,696	119	792	524	2,437	5,502
Sugar ..	,,	54,438	138,159	115,633	69,428	109,140	1,305	3,859	5,459	3,714	6,147
Rubber ..	,,	31,494	33,998	22,661	33,251	23,586	7,496	7,484	3,997	6,239	3,715
Cocoa ..	,,	43,720	55,621	41,685	62,584	54,418	2,500	2,535	2,158	5,602	3,821
Coffee ..	1,000 bags	13,039	10,606	7,433	12,963	11,524	29,280	23,054	19,040	72,607	52,821
Hides ..	Tons	53,510	39,912	45,584	56,787	37,265	4,353	4,224	3,990	6,043	4,021
Tobacco ..	,,	21,021	25,282	29,010	42,575	31,469	1,507	1,201	2,116	4,224	2,405
Mate.. ..	,,	76,776	65,430	72,780	90,199	90,686	1,885	1,817	2,151	3,200	2,972
Skins ..	,,	3,840	3,045	2,215	5,165	3,965	825	1,091	669	3,072	2,989
Chilled-meat	,,	33,661	66,451	60,508	54,094	60,897	1,414	3,184	3,246	3,592	4,064
Ten articles	—	—	—	—	—	—	50,684	49,241	43,350	110,730	88,457
Miscellaneous	—	—	—	—	—	—	5,778	13,790	17,817	19,355	19,064
Total ..	—	—	—	—	—	—	56,462	63,031	61,167	130,085	107,521

A further valuable article of export is rice, whose sudden growth from three tons in 1915 to a value of £5,803,000 in 1920 is remarkable. The frozen and chilled meat industry has come to being since the war: the first export, in 1914, was less than two tons, whilst in 1920 the value was £4,064,000. The export of timber for the same year was valued at £1,200,000. The total value of the exports for 1920 was 1,752,400 contos, and of the imports 2,090,630 contos (a conto =1,000 milreis, or at par =£112 10s.), the United States taking of the exports a value of £45,000,000; France, £12,850,000; British Empire, £8,760,000; Germany, £6,200,000. The imports from the United States were, in contos, 880,200; Great Britain, 453,000; France, 117,000; Germany, 104,900; Italy, 50,000; Belgium, 38,900; Portugal, 43,000; India, 18,900; Canada, 11,000. Among the principal imports are machinery, etc., materials of construction, coal, petroleum and textiles, etc.

The total amount of British capital invested in Brazil reaches £220,000,000 in bonds and shares quoted on the London Stock Exchange, figures which serve to shew the very considerable property of British shareholders in the Republic. British banking interests are also predominant, and the three principal banks in Brazil founded from London, have an aggregate capital many times exceeding that of all other nationalities combined. The financial and commercial, as indeed the political relations between Britain and Brazil are traditionally cordial, and the Republic owes much of its prosperity to the earlier influx of capital from the United Kingdom, upon which many of its chief public works were built up.

In the Great War, Brazil declared itself on the side of the Allies, and the Republic co-operated with them to the extent of actively assisting with its navy, sending forces to the Western Front, and forwarding supplies.

The national revenue of Brazil increased greatly in the ten years from 1902 to 1911, nearly doubling itself, from 320,000 contos to 506,000 contos. The expenditure, however, rose in the same period from 300,000 contos to 600,000 contos, with a corresponding deficit. The external debt reached in 1911 nearly £83,000,000 and 300,000,000 francs, shewing a

considerable increase over the preceding year, due mainly to the loan for Rio Port works and the Ceara railways. The fund for the redemption of the paper currency reached 47,000,000 contos. The economic condition of the country was regarded by its ministers as excellent in view of increased revenue from Custom house and internal taxes, which indicated commercial and industrial improvement.* The external debt at the close of 1920 was £103,035,000 and 322,250,000 francs. The revenue in 1920 was 7,534 contos over expenditure.

The general plan of commercial development in Brazil, as shewn by the government policy, is to bring about greater independence, by developing both the food supplies of the country and stimulating home manufacture. This must be regarded as a wise principle, from the point of view of disinterested economics. It may be possible, taking into account the varied resources of the country, to carry the principle into effect in the future, but the Brazilian, having acquired wealth, and possessing a native love of display, must continue to purchase from abroad many articles he cannot manufacture at home. For this luxury heavy taxation is incurred, and except for the poorest class, the cost of living in Brazil is extremely high. With the growth of democracy—it is to be recollected that as a republic Brazil is only thirty-three years old—a more equitable adjustment of the affairs of the republic will doubtless grow to being, and it is in the education and upraising of its great masses of population that the policy of the government should be exercised: side by side with its good policy of national industry-planning.

* Supplementing the table on page 102, the 1921 imports and exports of Brazil fell by 50 per cent. from those of 1920, or imports value £60,468,000, and exports £58,580,000. There were many commercial failures owing to trade depression.

CHAPTER III

THE AMAZON VALLEY

The possession of the great Amazon Valley confers upon Brazil a topographical distinction possessed by no other nation in Latin America: except that Peru, Bolivia and other adjoining republics share it to a less extent. The Amazon is the largest river in the world: flowing from its most remote source to the sea for 4,000 miles, and possessing innumerable navigable tributaries in addition. In some respects this giant stream is the most interesting and mysterious upon the globe, both as concerns its history and its topography.

The tributaries of the Amazon have their rise in the perpetual snow cap of the Andes, above the high tablelands and valleys of Peru and Bolivia, which were the seat of a civilisation as old perhaps as those of Mesopotamia and the Nile—the ancient empire of the Incas and the still older cultures of their predecessors, the ruins of whose buildings are still encountered in profusion upon headland and hill. Flowing thence through a series of mighty cañons, forming the most rugged and least-known country on the face of the globe, the affluents of the Amazon traverse for thousands of miles the dense forests which clothe the heart of South America, and form one great waterway, navigable for transatlantic steamers for nearly 3,000 miles from the mouth; with a delta larger than that of the Nile and the Ganges combined. The basin or valley of the Amazon, including the broad region forming the Amazon watershed, embraces portions of six of the South American republics—Brazil, Peru, Bolivia, Colombia, Ecuador and Venezuela—and constitutes one of the most backward regions of the globe. The area

comprised is equal to four-tenths of the entire area of South America. Yet less than a hundred square miles of this enormous region are under cultivation, whilst its total population, including the Indians of the forests, does not exceed three quarters of a million souls. During the end of the nineteenth and first decade of the twentieth centuries these Indians have been greatly reduced in number, partly by the methods of the rubber merchants, whole tribes having been sacrificed under the system of forced labour: partly due to tropical diseases and vices learned from the white man.

Ever since the time of Orellana, the lieutenant of Pizarro, who in 1540 descended the Amazon from Ecuador, and Pedro de Texiera, who ascended it in 1639, and who were the first white men to do so, the Amazon has hung back in its economic development. Even at the present time, along the great tributary streams—themselves rivers of thousands of miles in length—great distance may be traversed without encountering a single native. But this was not always so, and the depopulation is due partly to the acts of the early Portuguese colonists and authorities: for, during the three centuries of Portuguese domination of the valley of the Amazon, the huge region was closed to the commercial world, and within this close period the primitive, docile native population was enslaved, abused and destroyed, with no mitaigting circumstances attending this ruthless domination except that of the devotion of the Jesuit fathers. The destruction wrought by Spaniards among the natives of the Mexican and Peruvian uplands was duplicated by the Portuguese among the inhabitants of the Amazonian forests, and the effect of their ravages remain to this day. What those ruthless Conquistadores left undone is being accomplished by the rubber gatherers and merchants, especially in Peru, and by hardship and disease.

The remotest sources of the Amazon are in the Peruvian Andes, upon the upper Marañon, whose origin lies slightly beyond lake Lauricocha; and upon the Ucayali, the birthplace of whose affluent, the Apurimac, is near Caylloma. The numerous smaller tributaries which unite to form the

great tributaries of the Amazon rise at elevations of 14,000 to 16,000 feet above sea level, and are fed by the permanent snow cap and the constant rain storms of those regions. The Peruvian Amazon tributaries, the Marañon, the Huallaga, the Ucayali and others flow northwardly in a direction roughly parallel with the trend of the Andes for a thousand miles or more before turning eastwardly to cross the Amazon plain through Brazil. At the turning point they are joined by some of the more important tributaries which descend from Ecuador and Colombia. The headwaters of the great Beni and Madre de Dios are in Bolivia and Peru, and these rivers traverse an enormous area of territory, forming the southerly limit of the Amazon basin and falling into the Amazon in Brazil.

Portions of the region traversed by these rivers are among the still savage areas of the earth's surface, and the most difficult to explore. There is still a certain amount of danger from blow-pipe bearing Indians, but the chief obstacles to travel are the broken nature of the country, the impenetrable forests, through which the torrential rivers are almost the only highways, and greatest of all the difficulty of transporting a sufficient quantity of provisions for consumption during the exploration. Mosquitoes and malaria, the heavy rains, and in some cases the unreliability of the native in transport and escort work, are added difficulties. The danger from wild beasts has been greatly exaggerated; the Amazon forests from time to time have been represented as teeming with beasts of prey, but in reality the traveller may pursue his journey day after day and scarcely disturb bird or beast. The most dangerous and troublesome creature in these savage regions is the mosquito and its kindred, it is scarcely an exaggeration to say. Except by actual travel no adequate idea of the Amazon forests can be obtained; of the alternating splendour and gloom of the superabundant vegetations, and the impenetrable walls of foliage presented by the dense vegetation.

The main stream of the Amazon is navigable for ocean steamers in favourable seasons 3,000 miles from its mouth to its junction with the Huallaga in Peru, and in addition

to the principal course there are many navigable side channels which run parallel thereto, almost as far as the confluence with the Yavari. Numerous tributaries are navigable for steamers of lesser draught, and the total length of navigable waterways serving the Amazon valley, throughout Bolivia, Brazil and Peru, is calculable as over a hundred thousand miles. Iquitos, the eastern capital of Peru, the terminus of the ocean steamer-line from Europe, is 2,500 miles from the Atlantic. A British war-vessel a few years ago ascended the Amazon to Iquitos, displaying the white ensign for the first time in the very heart of South America. Some years ago Iquitos became notorious due to the exposure of the atrocities of the Putumayo, which river enters the Amazon from the north-west, from Colombia and Peru. At Tabatinga, the Brazil-Peru frontier, 2,000 miles from the southern mouth of the river below Para, the Amazon is more than 9,000 feet wide, and the depth of its channel under normal conditions is 66 feet, with a current velocity of about 1½ miles an hour: figures which serve to shew the importance of the waterway. Among the larger tributaries of the Amazon are the Madeira, which rises in Peru and Bolivia, and flows for 2,000 miles to its confluence with the Amazon; the Purus, also 2,000 miles long, and the Jurua, more than 2,000 miles long. The Tocantins—practically a separate system—and the Araguaya, flowing from the south across Brazil, are each over 1,600 miles long; whilst the Tapajos, the Xingu, the Japura, the Guapore, the Rio Negro, the Ica or Putumayo, measure, in the order of their enumeration, from 1,200 down to 900 miles in length. The Peruvian Amazon is elsewhere described.

The Amazon forest extends from the Atlantic ocean back to the Andes for more than 2,500 miles, but its width varies greatly, being perhaps 200 miles wide on the coast and about 900 miles wide between the plains of Venezuela on the north and those of Bolivia on the south, upon the slopes of the Andes. The marvellously rich flora of the Amazon region is classed among the wonders of the world. As regards animal life, the Manati, or sea-cow, which inhabits the lower Amazon, sometimes reaching 15 or 20 feet in length, is among

the most remarkable mammals in the world. Fifty species of monkeys are encountered, and the sloth, the tapir, the peccary, and the jaguar are well-known denizens. The flooded areas of forest are highly favourable for the development of reptiles, chief among which is the alligator, and some of the species are dangerous and voracious. Turtles are so numerous that the eggs and flesh of these reptiles have always furnished food for the Indian tribes. The enormous size of the boa constrictor renders this reptile one of the most remarkable of the Amazon valley. The numerous species of birds provide many of the most brilliant plumage, but they are generally poor in good songsters.

The average rainfall of the Amazon valley has been estimated at nearly 79 inches. The maximum rise of the annual flood is 45 feet; two floods occurring annually, one in November and December and one from March to June; the latter the main flood, which finally subsides in October. The short dry season on the upper Amazon is in January and February, and in May a brief cold period is experienced.

The principal characteristics of the forests of the Amazon valley, apart from their enormous extent, is the great variety of genera and species. In the temperate zones of North America and Europe forests of a single species, or of three or four species, prevail, but in the enormous jungle of the Amazon, which embodies the largest virgin area of woods upon the earth's surface at the present time, the solitary habit of growth is shewn by the fact that a single acre of ground may contain hundreds of different species of tree and shrub life, including palms, acacias, myrtles, mimosas and others. This condition is a drawback to a profitable lumber trade, although profits may be made out of individual kinds. The vegetation differs between the lower river-margins, which are flooded at regular intervals, and the higher ground, as well as between the Amazon and its tributaries. The lianas, which overgrow even the tallest trees, greatly increase the density of the forest. The trees are not necessarily of great height in the Amazon valley, some species reaching only 200 feet, whilst the general height is but half that, especially in the plains subject to the annual floods.

The largest is the " cow-tree " or Massaranduba, so named from its abundance of milky sap. The timber of this tree is valuable for shipbuilding, and the latex or milk is of value in rubber curing, and is also exported for medicinal purposes. Cabinet woods are not very abundantly exported, taking into consideration the capabilities of the huge forests; and this is due largely to the cost of timber transport on the coast.

The general characteristic of most of the Amazonian timber is an extreme hardness, some of the woods being more like metal than vegetable fibre, and the hard and often extremely beautiful woods of northern Brazil are mainly of use to the constructor of railways and the cabinet maker.* For railway sleepers some of the local timbers are admirably suited, notably the " cow tree ;" and in the construction of the Madeira-Mamoré railway, sleepers of this wood have been used. This wood displays considerable power of resistance, whether exposed or half exposed to air and weather. Many of the local woods are suitable for pile driving and boat building, and for ordinary furniture and household fittings the local " cedar " wood is excellent, being light but strong and susceptible of a very high polish. The Amazon cedar tree grows to an immense height. One of the floating trees of this wood, picked up in the river, measured 93 feet from the swell of the root to the first branch, and at this point, which would have been about 8 feet from the ground had the tree been standing, the girth was 19 feet. The town of Itacoatiará, lying opposite the mouth of the Madeira, is the centre of the cedar supply in the state of Amazonas, and there are several large sawmills there.

The export of Brazil nuts at times is second in value only to that of rubber from Pará and Amazonas. The ordinary nut, the Bertholetia, develops inside a hard shell, twenty or more nuts being almost hermetically sealed within, forming a strong weighty capsule, which when fallen the natives split open. The tree grows on open ground, and is one of the loftiest trees of the Amazon forest, growing to an immense height, and of three or four

* Foreign Office report (Casement), 1908.

feet in diameter. The collection of the nuts is at times dangerous, as the heavy capsules are as hard as iron, difficult to saw with the sharpest instrument, and equal in weight to a small cannon ball, and the gatherer does not generally venture beneath the tree when the wind blows for fear of the projectiles falling upon him from the great height, but waits until they are fallen. The Sapucaya, the other variety, has its capsule furnished with a species of lid, which opens and the nuts are scattered in all directions, being lost in the water or eaten by wild animals. Consequently its value to the gatherer is less, and its price higher in the market. As well known, the nuts themselves have a very hard shell, even inside their iron-like outer shell, and the extreme hardness of nature's products, both in these fruit coverings and in the hard woods in the Amazon forest, is a curious circumstance. The Brazil nut tree is a prominent member of the forest, and the collection of the nuts requires little more capital than that involved in the possession of a boat ; and the industry might be increased, in view of the high price of the nuts in foreign markets.

The native products of cocoa, nuts, and cattle breeding might be the basis of more important industry. Over a length of 1,600 miles up the Amazon and its main tributaries, cocoa trees are to be seen growing around the huts of the semi-aquatic riverine dwellers, often submerged in the flood of the river, which frequently ruins the plants. Beyond the reach of this periodical overflow the ground often rises in ridges capable of easy cultivation, and were methodical agricultural life existent along the Amazon water-ways, the output of cocoa, and a wealth of other food supplies, would be only a question of organised labour. The methods of production to-day are, however, little in advance of those the early settlers must have adopted from the native. It is only another proof of the natural wealth of the Amazon valley that, despite this apathy and want of system, the output of cocoa should be so considerable. Even in the middle of the last century, when slave labour prevailed, cocoa rivalled rubber as one of the two chief articles of export from Pará.

As regards the cattle industry, the chief source of the local beef supply is the island of Marajó, which lies in the mouth of the Amazon to the north of Pará. A stock of some 300,000 animals is said to exist on the broad, swampy savannahs of this island—a small number when it is considered that Marajó is usually spoken of as "as large as Sicily," and consists chiefly in grass lands.

The island was, in the early days of Portuguese adventure, inhabited by a numerous Indian population, whose villages and burial sites may still be traced. To-day it is a land of cattle ranching, the ranches diversified by wide lagoons and lakes, connected by many *igaripes*, or creeks, and filled with innumerable alligators and turtles. The city of Pará consumes annually 20,000 head of cattle, raised within the state limits, besides beef imported from Argentina, and a further 20,000 head of beasts locally raised are annually used in the outlying townships of the state. The cattle-raising districts of the Lower Amazon are all liable to annual inundation in May and June, when the river is at its greatest height, and numbers of beasts are drowned and taken by alligators. The loss due to this cause has been put as high as 90,000 head in a single year (1898), and it is a common sight, when passing a cattle *fazenda* or estate, to see from the deck of the steamer the cattle standing up to their necks in the water.

Under present conditions the rubber export is the principal industry, coming second in importance to coffee in Brazilian trade, and yielding one-third of the income of the republic. Almost the entire output of rubber is from the uncultivated forest; plantations being few in number. The rubber forests of Brazil are capable of practically inexhaustible supplies, and were all other sources cut off, Brazil would still be able to meet the major portion of the demands of the world's commerce. Nevertheless, the competition of the newer rubber-producing regions of Malaysia, many of whose plantations are coming into bearing and proving a commercial success, will have their effect upon the wild rubber industry of Brazil. The increased output and easier and more methodical means of collection of the planted

rubber tends to cause a marked decrease in the price of the article; conditions which have been carefully watched by the Brazilian Government, who have grasped the necessity for the improvement of the industry in the Amazon valley. With this purpose in view new measures have been adopted, based upon decrees made in January and April, 1912,* for the protection and development of the forests and the workers; regulations which, if carried into effect, should result in improved conditions. The elaborate clauses of these decrees provide for the construction of light railways, the establishing of new "colonies" and rubber gathering centres, the paying of prizes and premiums for the systematic planting and cultivation of the various kinds of rubber trees, the creation of experimental stations, the subsidising by cash payments of factories for refining and treatment of the crude rubber, the furnishing of carefully selected seeds to planters, the establishing and upkeep of hospitals for the rubber gatherers in the forests, the freeing from import duty of all appliances used in the industry, the creation of centres and plantations for the production of cereals and foodstuffs and of cattle farms, with concessions to companies establishing such, with money grants for cultivation, and the assistance of native or foreign immigrants; and in brief, a scientific and methodical plan for the development of the industry. The varieties of rubber encountered in Brazil which are specially made the subject of cultivation in the decrees are the seringa, caucho, Maniçoba, and Mangabeira. Upon a plantation and semi-plantation basis there is little doubt that far better results are to be attained, but these will be dependent upon the honesty of the administration connected therewith and upon the availability of labour. It further remains to be seen if artificial rubber is to be a competitor in the future.

The city of Manaos was created by the rubber trade, and is the geographical centre of the Amazon valley, as well as the distributing point of its civilisation. It is reached by ocean steamers from Liverpool and New York, and the navigable waterways extend far beyond, to the foot of the

* Brazilian government documents.

Colombian, Bolivian and Peruvian Andes. The city stands near the confluence of the Rio Negro and Amazon. The black waters of the Negro, coming down from the north, for a thousand miles, from the forests of Venezuela, Colombia and Ecuador, mingle with the muddy stream of the Amazon. Below Manaos the great Madeira river enters the Amazon, coming from the south-west. A thousand miles up stream the terminus of the new Madeira-Mamoré railway is reached by ocean steamer.

The Madeira-Mamoré railway has been built to avoid the rapids and cataracts of the river, and will provide a link in a chain of 2,000 miles of navigable water, which principally serves eastern Bolivia and the Brazilian state of Matto Grosso. The earlier obstacle to the construction of this line, which has a terrible history, was principally the climate, and the fever resulting therefrom. Methods of sanitation similar to those employed upon the Panama canal have been largely successful in overcoming the difficulty, and quinine has been perhaps as potent as the engineer. Porto Velho is the lower terminus of the line, 200 miles in length, a fluvial port 2,000 miles from salt water and the head of ocean steamship navigation on the Madeira. Along the bank of this Brazilian town, buried in the jungle in the heart of South America, lie tramp steamers from New York or Liverpool, which, under their own steam, have reached the port, 600 feet above the level of the sea. All around the place the thick curtain of the Amazon forest descends, beyond whose edge is the utterly unknown wilds, whose only tenants are the shy, harmless little Indians, who emerge naked and timid therefrom ; and, in still more inaccessible hiding places, some cannibal tribes, whilst the howl of the jaguar resounds through the forest at night. The rapids which the railway is designed to avoid were the source of much danger and loss, even to the large canoes, which laden with rubber descended them from the rubber forests of Bolivia and were frequently wrecked. By means of this line thousands of miles of smaller streams in Bolivia are put in communication with the Amazon to Manaos.

Immediately above Manaos the virgin forest closes in, and

scarcely any sign of activity is apparent over immense distances, with the exception of an occasional hut built out on piles, whose dwellers are rubber gatherers, or wood-cutters who supply fuel for river steamers carrying rubber; and the languid or fever-stricken occupants of these dismal regions draw what small wealth they enjoy from the same source —that of rubber. Other products of the Amazon valley which would yield well to cultivation, under better condition, are cotton, maize and rice, for which there is a demand: also coffee, oranges, mangoes and other kinds of tropical fruits. Whether the original inhabitants of the forests, the Indian tribes, would have made efficient plantation labourers is a matter undecided, but a great many of these tribes are now extinct, and the class inhabiting the towns are unsuited thereto; whilst the rubber workers, who regard themselves as skilled labourers, and receive good pay, would be unlikely to turn to agriculture, except under the stress of necessity, which however may occur if the rubber business declines. Manaos lies isolated, save for the great river, amid practically primeval forests. No sources of food produce surround it, and no roads connect it with other centres of human effort. Thirty years ago the town was neglected and insignificant, for rubber had little use or demand then, but with the growing demand and price Manaos became a fine city, with a cathedral, a bishop's palace, a great theatre, electric light and electric trams. Agriculture is neglected: the advent of rubber, the rush and greed for the "black gold," as it has been termed, has brought about its decline, and the small plantations of cotton and maize have gone to decay; the forest has overwhelmed the clearings, and the workers who cultivated them have abandoned the soil for the rubber forests.

Formerly Brazil contributed 90 per cent. of the world's supply of rubber, but this proportion has greatly decreased. The rubber crop of the Amazon valley in 1911-12 yielded 36,547 tons of rubber, as against 39,000 tons for the year 1909, according to the Brazilian government statistics. The rubber included is of two kinds, rubber and caucho. That of Brazilian origin came from the forests of

the following rivers approximately: 3,000 tons from the Solimoes and Javary rivers; 12,000 tons from the Purus and Acil; 4,800 tons from the Juruá; 5,700 tons from the Madeira, and 850 tons from the Negro, with 2,500 tons from Iquitos. Of the total amount 23,000 tons was classed as rubber and 5,800 as caucho. The exports of rubber and caucho from Manaos to Liverpool were 6,200 tons, and elsewhere to Europe 7,875 tons, and to America 9,045 tons. The maximum price obtained for fine rubber per pound at that time was 5s. 2d. In 1919 the total export was 33,000 tons. There are now numerous plantations.

British capital is fairly well represented in the Amazon valley, the steamship line from Liverpool being a British enterprise and dependent upon Amazon trade, and the harbours of Manaos and Pará are both in the hands of British companies. Port works, waterworks, tramways, and electric lights are largely owned by British shareholders in these towns, matters whose prosperity depends upon rubber. The capital of the Pará electric tramways company is £780,000. The traffic revenue in 1911 amounted to nearly £200,000, and that from electric lighting nearly £90,000; and a profit of nearly £116,000 was paid. Foreign business in Pará is well divided internationally. Luxurious motor-cars are imported from France and the United States, and although the roads in Pará and Manaos are unpaved, the cars are considerably used, especially by doctors and others. Cotton goods come from Manchester, and Britain also predominates in exports of alcoholic drinks, as gin, whiskey, and brandy. Only the best quality of champagne is appreciated, which comes from France, and wine from Portugal. The Latin American people are largely addicted to alcoholic drinks of this character, especially liqueurs and high class productions generally from Europe. A good deal of falsification takes place, especially in the re-using of bottles and labels of well-known brands. Germany dominates the market of Pará for laces, cloth, embroidery cotton, articles of tin and aluminium, toys, lamps, mirrors, pencils, paper, and also supplies musical instruments and articles of clothing. In the finer sorts of clothing France occupies the first place,

as also with drugs and perfumes. The number of German commercial travellers generally preponderates over those of any other country. The method of doing business by commercial traveller is stated to be the better way in Brazil, for correspondence does not always receive attention, and full security must be established.

With the increase of industry, motor-boats may be expected to multiply on the Amazon in the future. In the Brazilian state of Amazonas alone there are 45,000 miles of navigable water at the disposal of the inhabitants, which offer means of communication in regions through which railways possibly will never penetrate. But one of the requisites to the progress of the Amazon valley in the future will be that of labour. There is a considerable supply of cheap and good labour in the West Indian Islands, but the negroes of the British possessions would, in view of the disclosures of the Putumayo, where they were imported and forced to work as slave drivers and made professional floggers and murderers of Indians, have to enter the valley under supervision. A railway from British Guiana along the Rio Branco, which, coming from the north enters the Rio Negro above Manaos, has been projected, and would form a means of entry for such labour.

In regard to native labour in the Amazon valley, a Bill has been brought forward in Brazil by the Minister of Agriculture for the betterment of the condition of the Indians, the republic being anxious, in view of recent occurrences in the Amazon valley, to justify before the world its attitude towards the Indian citizens. As an ethnic element the Indian is vastly superior to the negro, and it is an insane policy to permit the deterioration of these valuable races. The history of the Indians in Brazil is a curious one. As early as 1537 Paul III. declared "that they were men like others," and therefore free, while regulations were drawn up in 1548 and 1570, which, though somewhat contradictory to each other, yet made for the liberty of the Indian. Later on, however, the Pope, alarmed at the atrocities which had occurred in Mexico and Peru, "sanctioned slavery as a means of avoiding these horrors." In

1639 Pope Urban VIII. excommunicated the captors and vendors of the Indians, but later the Portuguese Government allowed the establishment of slavery. Brazilian legislation dealing with the Indians dates from the Royal mandates of Dom John VI., which permitted slavery. In 1831 the orders of Dom John were repealed, and the Indians considered as orphans in the eyes of the law, and in 1883 the Judge whose business it was to look after orphans and their property was instructed to protect the Indians. This decree was confirmed in 1842, and the standing of Indians in Brazil has remained the same down to the present day. The first step which would be taken under the Bill, if it becomes law, would be the recognition of all Indians born on Brazilian soil as Brazilian citizens. Furthermore, they would be classified, registered, provided with a special penal code, and with safeguards for such tribes as are not yet sufficiently civilised to look after themselves completely as real citizens. Probably the general lines of the Bill would strengthen the hands of the service for the protection of the Indians, whose efforts so far have been considerably handicapped by the legal status of those with whom they have to deal. In Peru and other countries upon the Amazon valley the forest Indians practically have no rights, and have been hunted and enslaved like animals, without redress from the petty authorities, who indeed have countenanced or entered into these operations, known as *correrias*.

In all probability the exploitation of the Indian would never have grown to being if the fine work of the old Jesuit and Franciscan friars in Brazil and Peru had been allowed to flourish. One of the greatest names associated with the Amazon is that of the famous Padre Samuel Fritz, a Bohemian by birth, who passed the larger part of his life in the service of Spain, in Peru as a Jesuit missionary, working from 1686 to 1723 among the Indians of the Amazon forests. The Portuguese built forts at the confluence of the Rio Negro, where Manaos now stands, in order to assert their sovereignty, as against the Spaniards, over that part of the river ; and despatched armed bands up stream, which destroyed the Christian missions and settlements Fritz had founded. The

cruelties practised in these slave-raids, for such in effect they were, caused the tribes to flee to remoter regions, and a great diminution of the population followed, in the first half of the eighteenth century. It is only under a system such as the old missionaries established, a species of organised industry-planning in which native crafts and agriculture were encouraged, and self-contained communities created, that the valuable Amazon native tribes can be conserved. Modern "industrialisation" in any form, where they are exploited under a system of dividend-earning, will only ruin and destroy them.*

The uncivilised tribes of the Peruvian Amazon region number in the aggregate approximately 150,000 to 300,000 souls, but due to their widely separated conditions any exact calculation is impossible. Often there is little distinction between these tribes, except that of name; but some are clothed, and others naked, some who build houses and cultivate the ground, fight with poisoned arrows, build the war-towers for defence and use the singular *tunday*, or signalling instrument—a species of native acoustic telegraphy; some live in great community-houses, others in huts. Some of the tribes use bows and arrows, spears, and the blow-pipe, and manufacture the deadly poison, which forms an article of commerce among them. The tribes of the north are those who fashion the curious reduced human heads, by a secret process. Generally there is a want of cohesion among them, and even strife, conditions which have made them an easy prey to the depredations of the white rubber gatherers and merchants. Bullets, alcohol, small-pox, fevers, heavy mortality, and the *correrias*, or slave raids, have worked havoc upon these tribes.

The Amazon valley has been the scene of some of the most terrible and ruthless crimes ever performed in the whole history of commerce—the Putumayo rubber atrocities,† which, worse than the occurrence of the Congo, aroused the

* In giving evidence before the Select Committee of the House of Commons to enquire into the Putumayo occurrences, the author urged that tropical regions and tribes should now be made the subject of scientific study and supervision.

† See p. 231.

horror of the whole civilised world. The infamy of these acts does not belong to Brazil; they were carried out by Peruvians and Colombians upon the Putumayo river; a region whose ownership was under dispute between Peru and Colombia. The Putumayo river rises near Pasto in the Andes of Colombia, and traverses a vast region which forms one of the least-known areas of the earth's surface. This river is nearly 1,000 miles long, and enters the main stream of the Amazon in Brazil. The river crosses the equator in its upper portion. Like most of the Amazon tributaries, the Putumayo and its two affluents are navigable throughout the greater part of their courses, giving access by water up to the base of the Andes, and the rubber traffic is carried out by means of steam launches and canoes. The region is a considerable distance west of Iquitos; nearly a thousand miles by water; the small, intermittent river steamers of the rubber company occupying two weeks in the journey; and a part of the course lies through Brazilian waterway. A more direct route is effected by making a portage from the Putumayo to the Napo river, which enters the Amazon about fifty miles below Iquitos.

The native people inhabiting the region are mainly the Huitotos, with other tribes of more or less similar character, but with different names. These people, although known as *infieles* and *salvages*, that is, "un-faithed" and "savage" cannot be described as savages in the ordinary sense of the term. They have nothing in common with the bloody savages of Africa and other parts of the world: but are docile, affectionate, and devoted to their women and children. Their weapons are not adapted for taking life so much as for hunting. On the Putumayo the Indians have been reduced, it is calculated, from 40,000 or 50,000 to less than 10,000, partly by abuse and massacre: partly by having fled to more remote districts, away from their persecutors and the rubber "industry."

The Indians in the Peruvian Montana are not all pacific or docile; and villages which were established in earlier times by the Spaniards, with buildings, plantations, and

industries, have been destroyed by attacks of savages, and their ruins still remain. Probably these attacks were in the nature of reprisals. In some districts the danger from savages prevents settlement, and the blow-pipe and the spear greet the traveller who ventures there incautiously. Tales of savagery have been told in which the white man has been the sufferer; and there has always existed an animus against certain tribes of Indians.

The difficulties of Peru in the governance and development of its portion of the Amazon valley, known as the Oriente or Montaña, are considerable. The physical difficulties against what has been termed the conquest of the Montaña are such as it is impossible for the European to picture. Nature resists at every step. Hunger, thirst, fever, fatigue and death await the explorer in some cases in these profound forests. Peru has sent out many expeditions and the Lima Geographical Society has done valuable work. The possession of the Montaña is of incalculable value to Peru, and is a region any nation might covet. The Peruvians are alive to its value and possibilities, but they are poor. A government such as that at Lima might be well-intentioned, but distances are vast and with few means of communication, and distant officials are corrupt. The educated Peruvians of the coast region cannot be entirely censured for barbarities in the forests, which are cut off by the lofty plateaux and snowy summits of the Andes from the temperate lowlands where the European civilisation of the Pacific littoral flourishes.

The journey across the South American continent by traversing the Andes and descending the Amazon may be accomplished by the traveller who is prepared to endure hardships and delays and a certain amount of risk. It is nevertheless a journey of striking interest, taking the traveller from the shores of the world's largest ocean, across one of the greatest mountain ranges on the earth to the headwaters of the mightiest river upon the globe. The most difficult part of the journey lies in Peru. The Andes may be crossed at one of several points; whether by mule road from the coast ports which give access to Huaraz or Cajamarca, or

whether by the railway from Callao and Lima to Oroya. From these points, descending the eastern slopes of the Cordillera, the roads reach the head of navigation by canoe—the singular Indian dug-out—or by raft, upon one or other of the numerous streams which rise in Peruvian territory. In such small craft the head of steam navigation is reached, on the Huallaga or the Ucayali or other rivers, and the canoe exchanged for a small two-decked steam-launch, which may ply wherever the waterway has a least depth of four feet. The voyage is hot, slow and monotonous in descending these upper rivers when the rapids are passed. The river steamer affords matters of a more diverse character than the canoe, with Indian and mestizo passengers, men and women, baggage of all kinds, and at times men of all professions and nationalities, from Englishmen to Brazilian, Peruvian and Japanese, and from rubber traders to priests. The trading operations at the primitive settlements passed are of more importance financially than the passengers. These settlements are but palm-huts, with the primitive *menage* of their native occupiers. Among the articles may be seen the fine Ucayali pottery, with its intricate geometrical ornament—a trace of the mysterious culture of early Peru. Drink and dancing conclude the trade or barter, which includes rubber transactions and the purchase of wood fuel for the steamer. There is a constant alternation of blazing sun and blinding rain, but the effect is often fine, and the launch floats onward as a mere speck on the broad placid bosom of the mighty stream.

The length of navigable waterways of the Amazon in Peru is estimated as of 422 miles for steamers drawing twenty feet of water, 5,400 miles for steamers drawing four feet to eight feet, and 1,880 miles for boats of two to four feet draught. The Marañon river is navigable for 484 miles; the Ucayali 868 miles, the Purus 955 miles, and there are others similarly serviceable. These shrink somewhat in the dry season when the water is low, leaving about a quarter of the mileage navigable, except in the case of the main channels. At high water period, and including craft of all kinds down to rafts and canoes, the waterways of Peru are estimated

at a total length of 20,000 miles—traversing the Montaña in all directions. Some of these rivers are, however, in disputed territory. In Brazil the navigable mileage is correspondingly greater, and the neighbouring republics in some cases enjoy means of communication in this fluvial system, as described in their places.

The Government of Peru have striven to maintain a mule road, through the region of the Montaña to Puerto Bermudez on the Pachitea river, the head of steam-launch navigation; from Oroya, on the Oroya railway, which crosses the Andes from Callao. In places the trail is cut in precipitous mountain slopes; in others the heavy rains convert it into a quagmire almost impossible for the mules; and the frail bridges over often swollen streams add to the risks of the journey. A railway line is now under construction to replace this road. The change of climate from the snowy uplands of the Andes to the tropical forests upon this route is very marked. Halting places known as Tambos are kept up, which, however, are little more than primitive huts, and little in the way of clearing or cultivation has been done, whereby food supplies for man and beast might be rendered more plentiful. The region is, however, an attractive one for the naturalist. A system of wireless telegraphy has been established for some years over this zone of territory, with a station at Iquitos: and more recently a station has been erected at Lima on the Pacific coast, and wireless communication is successfully carried on with Iquitos, the distance being 650 miles. Considering that the enormous bulk of the Andes intervenes between the two places, rising to 18,000 feet or more, this must be regarded as a notable achievement. Wireless stations are also to be erected by the Bolivian government along the frontiers of Bolivia with Paraguay, Brazil and Peru, and thus communication will be maintained through the Amazon valley.

The possibilities for the improvement of river navigation, and the connecting of one fluvial system with another in the valleys of the Amazon and La Plata and others, are of marked interest. It is a noteworthy condition of some of these rivers that the water-parting between their sources is very

low, consisting in a short, flat " isthmus," and short lines of railway, or in some cases a canal would complete the circle of communication between fluvial systems whose outfalls are thousands of miles apart. In Peru, Colombia, and Bolivia, there are numerous " varaderos " of this nature, as the portages are termed, connecting the headwaters of the Ucayali and the Madre de Dios rivers, and across the varaderos the rubber gatherers carry their canoes. One of the difficulties of transport and the handling of goods by Amazon steamers is due to the great rise and fall in the river level between flood times. At Manaos this difficulty is very marked for six months in the year, but floating piers are being constructed to overcome the condition ; the work being carried out with the assistance of British capital.

In this comparatively little known and wide reaching region of the Amazon valley, Brazil and the adjoining republics possess national properties whose future value is incalculable, but which carry with them difficult problems and grave responsibilities. It is the most extensive river region in the world, and will be capable of infinite resources when exploited by a people who shall know how to turn its value to the good of the country and to the world.

CHAPTER IV

THE REPUBLICS OF THE RIVER PLATE—ARGENTINA

The name of Argentina bears with it a vision of illimitable prairies: the vast Pampas, inhabited by endless herds of kine: of dusty wildernesses rendered into fertile wheat fields and vineyards by irrigating streams of water: great melancholy plains whereon man and beast strive to increase and multiply, and where they have increased in a way unprecedented in the history of pastoral lands before—an increase which has been translated into terms of rich cities, with wide boulevards and parks, lined with the palaces of the newly-rich, the plutocrats of a new American nation of a type unknown elsewhere, its women flashing with jewels and fine clothes, its men ambitious to excel in their counting-houses; its working class poor, picturesque and hard-working. These people, and the great herds of beasts and fields of wheat, are not originally indigenous, but one and all are exotics, whose forbears and genus were first poured forth from Europe.

The great estuary of La Plata must be regarded as the commercial and maritime navel of South America. Towards this great inlet swarms of immigrants of the Latin race from the Old World have taken their way, and from it issues great store of food products of meat and corn, as if in the nature of compensation and return freight for the human cargo brought from Europe. The republic of Argentina, and to a much lesser extent Uruguay and Paraguay, together with a portion of Brazil, have as their physical basis the wide-spreading territory of the great pampas; the alluvial food-producing plains which are in some respects the principal

and most valuable topographical and economic feature of South America; traversed by the great rivers which have their outlet in the estuary of the River Plate.

The vast fluvial system of the River Plate, comprising the Uruguay, Paraná and Paraguay rivers and their affluents, is much less extensive as regards length of navigable waterway than the Amazon, but more important in other respects. The Paraná is navigable for vessels of twelve feet draught as far as the city of Paraná, 300 miles from Buenos Ayres; and to Rosario, 185 miles from Buenos Ayres, for vessels of fifteen feet draught. Above Paraná the river is navigable for vessels drawing ten feet of water as far as Asuncion, the capital of Paraguay, 970 miles above Buenos Ayres; the affluent upon which that city is situated being the Paraguay river, intersecting the republic of that name. The Paraná and its affluents drain an enormous area of territory, of very diversified characteristics, but the system is obstructed in its upper portions by rapids and cascades, although great stretches of water are navigable for smaller crafts. The Uruguay river is navigable for vessels drawing fourteen feet of water as far as Paysandu in Uruguay, about 200 miles from Buenos Ayres, and thence to Salto, 100 miles beyond.

The two great seaports and commercial centres of the River Plate are Buenos Ayres and Montevideo, the capitals respectively of the republics of Argentina and Uruguay; also the port of La Plata. These two important maritime centres lie, the first upon the southern, and the second upon the northern side of the great estuary, 150 miles apart, and the port of La Plata lies slightly to the east of Buenos Ayres. These places are not by nature first class seaports or harbours, such as is Rio de Janeiro, and heavy outlay in dredging and docks has been necessary to ensure facilities of access and harbourage for Buenos Ayres.

Argentina, above all the Latin American nations, has forced itself upon the notice of the world by reason of its rapid material growth. The country has established itself as the representative of a new type; and may be regarded as a vigorous development of the Latin race. The condition has arisen in the main from reasons of soil and climate.

The great pampas, or prairies, grassy and treeless, covered with alluvial soil of a fertile nature, almost level, extend from the Atlantic towards the Andes upwards in a gentle slope : and these plains are the basis of the important cattle and wheat industries, which have made Argentina a reservoir of food supply for export and have created for it enormous wealth. Argentina, first in many respects, stands second in area and population among the South American states, coming next to Brazil. It occupies the greater area of the southern part of the continent, covering more than 1,000,000 square miles of teritory. From Tierra del Fuego in the south to the Brazilian frontier in the north the country has a length of 2,285 miles, with a greatest width of 930 miles. This large expanse of territory is not all prairie. A zone of mountains and high tablelands in the west extends the whole length of the country bordering upon the Andes, and in the south forms the desolate steppes of Patagonia. In the north lies the Gran Chaco, the extensive and partly unexplored region of plain, forest and lagoon, with several elevations of 600 to 800 feet above sea level. This plain, which is one of the marked topographical features of the interior of South America extends southwardly, between the Paraná and Uruguay rivers, forming the " Mesopotamia " of Argentina, terminating in the province of Entre Rios. The most valuable part of Argentina is the pampas, the enormous wheat-growing and cattle-grazing regions. The variations of climate are wide throughout the country, but the mean annual temperature of the pampas region and Buenos Ayres, situated upon its eastern edge, and of the coast is about 63°, with a maximum and minimum of 104° and 32° respectively. There is an annual rainfall of thirty-four inches, and an absence of snow. The climate of the pampas must be considered healthy and temperate, but it is subject to cold storms from the south and west which at times cause great loss to the flocks and herds. The dust storms are an unpleasing feature of the region. The extreme north of Argentina lies in the torrid zone, and in the extreme south snow falls every month. In the Andean region hot dry winds from the north-west blow strongly, and with the cold

south winds which at times suddenly follow are a source of great discomfort and even suffering. Like all South American countries, marked extremes of topography and climate are encountered in Argentina.

The composition racially of the people of Argentina is not generally understood abroad. The Argentinos, as they are termed, are by no means exclusively made up of the Spanish race, and a very small portion represents the indigenous or Indian element. The population of the republic, which in 1810 was 500,000 now numbers nearly 8,000,000. In the half-century from 1857 to 1907 nearly 1,750,000 Italian immigrants entered the country, as against 670,000 Spaniards. Of British arrivals there were in that period only 40,000, of Germans 26,000, of Swiss 25,000 and of Belgians 20,000. The total immigration from 1857 to 1908 was 4,250,000 people, nearly 1,750,000 of whom left the country again. It is estimated that there are only 10,000 Indians in Argentina, principally in the remote parts, and less than 1,000 negroes. The Argentinos are therefore a mixed European race, with the Italian element predominating and the Spanish secondary. A great number of the Italian and Spanish labourers return home after the wheat harvest with their earnings, and others leave the country due to the high cost of living, the difficulty of obtaining land and other causes: and thus immigration is a fluctuating quantity, which is not advantageous. In 1920 the number of immigrants was 188,688, and of emigrants 148,907.

The census in Argentina has not afforded exact data regarding the population. It is a remarkable condition that the census of 1908 gave careful figures of the numbers of domestic animals and birds in the country, and even of their increase and sex, but comparatively meagre particulars concerning the human population. The number of oxen, horses, pigs and asses, pigeons and poultry, was carefully calculated, but statistics concerning the population outside Buenos Ayres were either not obtainable or were perfunctorily compiled. Fear of taxation and military service doubtless caused a portion of the population in outlying regions to evade the census takers, and added to this was

the difficulty of reaching the more remote territories; and the official enumeration, in round numbers, of 5,800,000 souls, of which half were returned for the city and province of Buenos Ayres, was probably an under-statement. The total population of the republic reaches, by the last official estimate of 1919, 7,890,000.

The republic is divided politically into fourteen provinces and ten territories, whose areas in square miles and populations, according to this estimate, are:—

Provinces	Area	Population
Federal Capital	72	1,650,000
Buenos Ayres	117,778	2,279,500
Santa Fé	50,916	983,800
Entre Rios	28,784	461,600
Corrientes	32,580	364,800
Cordoba	62,160	787,700
San Luis	28,535	128,100
Santiago del Estero	39,764	293,500
Mendoza	56,500	307,600
San Juan	33,710	129,000
Rioja	34,540	84,500
Catamarca	47,530	107,200
Tucuman	8,920	351,000
Salta	62,180	150,800
Jujuy	18,970	78,700
Misiones Territory	11,280	60,400
Formosa „	41,400	21,300
Chaco „	52,740	50,900
Pampa „	56,320	119,800
Neuquen „	42,340	32,500
Rio Negro „	75,920	46,600
Chubut „	93,420	27,700
Santa Cruz „	109,140	11,400
Tierra del Fuego Territory	8,300	2,500
Los Andes „	21,990	2,600

The constitution of Argentina embodies a government of executive, legislative, and judiciary powers. The legislative power is vested in a national congress of two chambers, the senate and chamber of deputies. The first is composed of thirty members, two from each province, elected by the provincial legislatures, and the second of 120 members, elected by the system of proportional representation, by direct vote, at the rate of one deputy for each 33,000 inhabitants. The chamber of deputies controls the initiation of money bills and matters relating to the enforced military service. The

executive power is exercised by the president, elected by presidential directors from each province chosen by direct popular vote, the vice-president being separately voted for; the system in this connection being analogous to that in the United States. The president exercises a veto power, overruled, however, by a two-thirds vote, and he, under advice of the senate, appoints the judges, diplomatic agents and governors of territories. The judiciary comprise a supreme federal court of five judges, court of appeal and attorney-general. The proceedings are under the antiquated Spanish system and are characterised as greatly defective. The provincial governments have their own constitution, each province elects its governor and functionaries of all classes, and has its own judicial and tax-making systems. The territories are under the direct control of the national government. Argentina is a federal as opposed to a centralised republic.

The blending of the various races which constitute the Argentine people have produced a distinct type, a new nationality, with a spirit of patriotism acutely marked; and in some respects exaggerated. The Argentinos are not merely Spaniards or Italians transplanted to the new world, but a people whose Americanism and sense of national pride is as great as that of the northern Americans of the United States. They are, as regards their upper classes, an active and intelligent race, and their women have the attractive traits and appearance of the Spanish American women, but with shades of character differing from the people of Mexico and Peru, or the neighbouring republics, due to the greater admixture of race. Like all Latin American women of the upper class, the ladies of Argentina are vivacious and pleasure loving, yet with the qualities of excellent wives and mothers.

One of the gravest social conditions in the republic is the lax and corrupt administration of justice in the courts, especially in the more distant parts of the country. Homicide frequently goes unpunished. The laws are good but insufficiently enforced, and property appears to be more highly considered than humanity. Argentina possesses certain laws which are new to European sociology. These include the

compulsory subdivision of property among heirs, and this may be taken as an earnest of the desire of the government to prevent the accumulation of land in single hands. A contract for tenancy moreover cannot exceed a period of ten years, and a similar law affects mortgage rights. Aliens and foreigners have, theoretically, equal rights as regards property-holding or disposal. The law requires a father to leave his children four-fifths of his possessions, or his wife, if childless, half, whilst an unmarried son must give his parents two-thirds of his property. As regards state military service all citizens are subject, a percentage, fixed by the budget, of the young men of the republic being called upon after their twentieth year to serve, the selection being by ballot, for a period of one year in the army and two in the navy.

In comparison with the other Latin American republics the people of Argentina have reached a higher standard of education, although compared with more advanced nations the illiterate element, which reaches over 50 per cent. of the population, is high. Primary education is free, secular, and compulsory, but the secular condition has been strongly opposed by the Church. Secondary instruction is also free, but not compulsory, and is under the control of the national government, which maintains colleges and normal schools in all the principal towns. There are several national and provincial universities for higher education, including faculties of law, engineering, and medicine. In regard to religion, the state controls all ecclesiastical appointments and the relation of the Church with the Holy See ; and founds or subsidises places of worship. The constitution recognises the Roman Catholic religion, but tolerates all others, and about 99 per cent. of the Argentine population are Roman Catholics. The Jewish colony numbers about 30,000, principally of Russian nationality.

In addition to those schools in which the usual subjects of education are taught, schools are being established all over the country for instruction in special industries. There are schools for agriculture and stock-raising in Cordoba, Mendoza, Tucuman, etc. ; a special school for the study of

wine-growing in San Juan; and veterinary colleges are being established in various provinces. There is also an industrial school in which certain trades are taught in Buenos Ayres, and a similar institution in Rosario; an academy of fine arts, which has recently been the subject of considerable controversy, and two institutions for the teaching of deaf mutes. One subject which is taught to an incredible extent is music. Many of the music-teaching schools, without national authority, confer degrees and diplomas upon their students, to replace which abuse a National Institute of Music is to be established. The number of libraries in the country is considerable, and the national library in Buenos Ayres possesses a large number of books in all languages. At a Congress of Argentine Libraries held in November, 1908, there were representatives of sixty-four public and fifty-nine private libraries, containing 1,280,700 volumes, with nearly 400,000 readers. The only British library represented at that congress was that of the English Literary Society, which was founded thirty-five years ago, and is the oldest British institution in the country. There are a number of English schools in Buenos Ayres and the suburbs, which, although compelled by law to give a minimum of education in the Spanish language, at the same time make English and English subjects a prominent part of the curriculum. Most of these schools have as head-masters graduates of British universities.

The universities have until recently confined themselves to the task of conferring degrees upon physicians, lawyers, and engineers, in accordance with the needs of the country. This work was performed by the two important universities of Buenos Ayres and Cordoba. Each of these universities contained the three faculties of law, physics, and engineering, but the university of Buenos Ayres has now added a further one, that of philosophy and letters, whose activities lie in the preparation of teachers for secondary and normal schools. Higher education in Argentina has recently been enlarged in its scope, and a modern spirit has been imparted to it by the creation of the new university at La Plata, also supported by the national government. To the university

of La Plata belongs the credit of having inaugurated in Argentina the movement for the exchange of professors with Europe and the United States, as well as other forms of university extension work.

According to the census of population, there are in Argentina about 600,000 boys and girls between fourteen and eighteen years of age, one-fifth of whom are resident in the city of Buenos Ayres alone, and yet the statistics of public education do not account for more than one-fortieth of this total. Moreover, out of the entire number who receive secondary education only about one-fifth secure its full benefits, since the more advanced training is of little use to those who leave the secondary school to take up agricultural, commercial, or industrial occupations.

One of the greatest handicaps to the creation of schools throughout Argentina is the lack of town and village life in the rural communities. The country is sparsely settled, as the present population per square mile is less than six inhabitants. The land does not in general belong to the labourer, but to landlords who own large tracts of it. The man who tills the soil does not particularly care to remain on it, and consequently there are no homes in the real meaning of the word. Children, among a large mass of the people, are thus placed at a great disadvantage from the educational point of view, and even when rural communities are gathered into villages and towns the population is so scanty that schools are very generally wanting. Furthermore, out of every 100 children entering school only thirty reach the third standard, and less than two reach the sixth. Therefore the benefits of public education are greatly restricted by the fact that some 200,000 children become men and women without having spent more than two years at school. The reasons for this seem to be mainly the unsuitability of the education given to the needs of the child. Not less than 69 per cent. of the children who have attended for the first year at school are, it is stated, unfit for promotion, which evidently shows some lack of adjustment of the school course to the capabilities of the child. The kindergarten movement, which has done so much

elsewhere, has made little progress in Argentina. Another reason for the failure of the school to retain the child may be found in the absence of that kind of training useful in after life. Manual work, athletics, nature study, domestic and experimental science are very inadequately taught, and this also tends to make the school less attractive to children.* Argentina spends about 30,000,000 pesos on primary schools. Out of this total the city of Buenos Ayres spends 13,000,000, the province of Buenos Ayres 8,000,000, and the rest of the country the remaining 9,000,000.

Buenos Ayres, the capital of the republic, is situated 115 miles from the mouth of the estuary, upon a flat, open plain extending far inland. The shore line of the estuary of the Rio de la Plata as the city is approached presents a low, monotonous appearance ; the great grain-elevators being the most conspicuous objects as viewed from the sea. These structures are indicative of one of the chief industries of Argentina, that of wheat-growing on the pampas. The elevators are of the character familiar to the North American and have a capacity for loading as much as 20,000 tons of grain daily, the grain of the small grey wheat of the pampas. Other prominent constructions on the shore line of the city are the great slaughter-houses, similar to those of Chicago ; indicative of the great pastoral industries of Argentina. Thousands of sheep, oxen and swine are disposed of daily, under the system of scientific butchery employed in these establishments.

The water front of the city is clustered with the poor dwellings of the Italian immigrants, who inhabit Buenos Ayres in sordid misery, for these human birds of passage often cannot or will not journey into the interior where their labour is required. The good pay offered lasts a comparatively few weeks, or possibly months, and this condition, in conjunction with serious abuses to which in the interior the immigrants are subject on occasions, both by officials and employers, acts as a deterrent. Notwithstanding the desire of the government of the country to

* From an article by the Director of the Pedagogical Museum of Buenos Ayres, in *The Times*.

ensure a supply of cheap labour, the economic and humanitarian management of the immigrants leaves much to be desired. Nevertheless, the arrangements for receiving immigrants are of considerable importance, and are constantly improving.

The importance commercially of Buenos Ayres is shown by the lines of ocean steamers constantly unloading at the docks. The efficiency of the docks was only obtained after a heavy outlay, due to topographical conditions, and in the last quarter of a century nearly £14,000,000 sterling has been spent in their improvement and equipment. Thus it was that serious difficulties have had to be overcome in order to render Buenos Ayres an accessible seaport of the first class. La Plata estuary is thirty-four miles wide at this point, but is so shallow that only by means of constant dredging in artificial channels can vessels enter the docks. Before the improvements were effected vessels drawing fifteen feet of water were forced to anchor twelve miles from the city, in the outer roadstead, where unloading was effected by means of launches and boats, in connection with the long wharves stretching seaward over the shallows. The revenues derived from the operation of the modern docks are satisfactory, yielding an interest of upwards of 8 per cent. per annum upon the cost of construction.

The city of Buenos Ayres has overtaken all its rivals and become the foremost city in Latin America, and the second Latin city in the world, in some respects due to the considerable area covered, of 47,000 acres, rendered possible by the flat site and unlimited space upon which it stands. The Argentine capital forms one of the largest municipalities in the world, coming next in that respect to London, New York, and Marseilles. The development of the city has been remarkable, and in the rapidity of its extension nothing can be compared with Buenos Ayres except some of the newer towns of North America. The population now exceeds 2,000,000, and the cosmopolitan character of the inhabitants is shewn by the fact that almost half their number are foreigners, Italians and Spaniards predominating. The rapid growth is shewn by the fact that in 1869 the

population numbered only 178,000; whilst at the present time the city contains one-fifth of the whole population of the republic. Notwithstanding its size, the city is greatly overcrowded, and more than one-fifth of the population live in tenement houses.

The ground plan of Buenos Ayres is that commonly encountered in Latin America, of parallel and cross streets and uniformly-sized blocks. The city is laid out entirely upon level ground, and formerly the older style of architecture adopted gave a somewhat monotonous appearance to the streets; but of recent years the increase in wealth and population has resulted in a bolder and more diverse architecture, with numerous public squares, handsomely laid out and well maintained; and of national edifices of costly appearance and great solidity. The old Spanish-colonial type of domestic architecture is of one-storey buildings with heavily grated windows, grouped as to interior constructure around *patios*, or enclosed yards, and opening on to the street with one wide doorway—the style such as is encountered throughout Spanish America, and this still prevails in part in Buenos Ayres. It is a quaint if sometimes monotonous style, and has many useful attributes. The flat, parapeted roofs, barred windows and heavy doors, give a quaint, almost mediæval aspect to the streets, which in its way is not less pleasing than more modern styles. This method of construction has been modified in the newer buildings of Buenos Ayres. Elegant private residences and costly and elaborate public institutions and business offices line the principal thoroughfares; and beyond these the numerous country houses and gardens render the suburbs attractive. The dismal quarters of the poor are, as always in the modern city, kept to their special districts; a different system to that which obtained in colonial times in Latin America, where the houses of the rich and the poor were often much intermixed. The modern architecture of Buenos Ayres has much of the Italian style run riot. Ornament has been piled on ornament in the dwellings of the rich. The use of plaster and stucco as the outside covering of buildings, whilst at times offensively ornate, is generally executed

with skill. The work has been done largely by Italian workmen, in imitation of freestone, enclosing the core of bricks, as in the buildings of Rome. The system is the result of necessity in the main, for building stone is not available in the environs of Buenos Ayres, nor anywhere in the republic; whilst brick-earth forms the underlying material of the riverine plain upon which the city is situated. Even in the finest public buildings marble is used only for part of the façade. Whilst many of the newer buildings of Buenos Ayres are sufficiently chaste in style and often splendid in appearance, and the more recent type of high-class dwelling an improvement upon its predecessors, the want of an individual style is notable, and this is generally characteristic of the architecture of the modern portions of all Latin American cities. The most chaste and durable building, both as regards style and work, is the Spanish colonial type, and possibly this will hold its own, especially when these communities become less plutocratic. Both chimneys and gabled roofs are absent from this style. The climate of Buenos Ayres is a temperate one, and although cold at times, fireplaces are not used, after the usual Latin American custom of dispensing with these; whilst the rainfall in many places is not sufficiently persistent to necessitate the sloping roof.

The plazas, or public squares, alamedas and parks of Buenos Ayres cover in the aggregate some 950 acres, a sufficiently generous area. Wide boulevards, electric lighted and paved with wood-block or asphalt, bisect the city, the principal of these typical thoroughfares being the handsome, spacious Avenido de Mayo, completed a few years ago at a cost of several millions of dollars, lined by lofty buildings; and the Calle Florida. Flowers, walks and shade trees are plentifully disposed in the plazas, giving a well-kept and attractive appearance to the newer parts of the city. The fine drive in Palermo Park, and the Avenida Alvear, or Argentine "Rotten Row," are other thoroughfares which act as a setting for the costly equipages, the Parisian dresses and the jewels of Argentine fashionable life. The considerable expenditure, of more than £6,000,000 sterling,

made of recent years upon water supply and sanitation works has banished the scourges of cholera, yellow fever, and bubonic plague, which formerly afflicted Buenos Ayres, and has created a healthy city, whose death rate has decreased from 27 per thousand in 1887 to 18 per thousand at the present time, comparing favourably with other capital cities. Despite these improvements, however, street construction, sewers and water-supply are still inadequate, leaving large parts of the city unprovided for, and subject to typhoid outbreaks. Money has been spent in some cases upon ornate buildings, which might have been diverted to public utilities: a condition commonly encountered in Latin American towns.

Apart from the newer thoroughfares the majority of the streets of Buenos Ayres are narrow, after the older type of Latin American towns, and the electric tramways of necessity run in single lines, returning upon a parallel street. The tramway system is an extensive and modern one, electrically operated, embodying nearly 500 miles of line, but further means of urban transit are requisite due to the growing traffic. The suburban railway service is a good one, and the building of suburban homes in the rural surroundings for dwellers of moderate means is a satisfactory feature of urban expansion. The proper housing of the working classes, however, receives far less attention, and is entirely inadequate.

The love of pleasure is strong in the Argentine character, as evidenced by the full attendances at horse-races, theatres, and gaming-houses, and the considerable expenditure connected with such institutions. Horse-racing is a growing sport all over Latin America, and the race-course and grand stand form the centre of society out of doors during the season. It may be regarded as an advance on the form of sport represented by the bull-fighting. The Jockey Club of Buenos Ayres is a wealthy institution, and more than £400,000 is provided for the season's stakes at times. The breeding of blood stock is very successfully carried out on a large scale, by a number of wealthy persons. Gambling is a ruling passion with the Argentino of all classes, and horse-

racing and cards form strongly attractive means of wager-staking. Horse-racing in the Argentine has acquired so much popularity that meetings are held almost daily on the fine racecourses, at Palermo, Belgrano, Lomas, Rosario, and at other places. The Jockey Club is the controlling body in Argentine racing circles. Not only does this club use its influence to encourage sport, but it has done much to promote the interests of horse-breeding in the republic. Unfortunately the growth of horse-racing has been attended with excessive betting. Huge crowds assemble at all the principal race meetings, and thousands of pounds are squandered annually by backers representing all classes of society. Flying exhibitions also offer considerable attraction to the sporting people of Buenos Ayres.

During recent years Association football has become so popular among the masses as to provide a powerful counter-attraction to horse-racing. Ten years ago football in the Argentine was confined to British residents, and the game was regarded by Argentinos merely as a series of antics of the *locos Ingleses* (mad Englishmen). But since those days a remarkable change has come about, and the Rugby game has also obtained many votaries.

Rowing has also become a favourite pastime amongst the rising generation in Buenos Ayres and the principal towns on the banks of the rivers Plate and Paraná. Large clubs exist at Buenos Ayres, Rosario, Baradero, Campana, San Nicolas, San Pedro, and Bella Vista, but the principal rowing centre and the scene of the prominent regattas is the Tigre, a summer resort on the Plate at a distance of some twenty miles from the capital. Tigre has been described as "the Henley of the Argentine," and the brilliant scene and great crowds at the regattas render the description permissible. British, Argentinos, and Germans all have their own particular clubs and, the rivalry is keen. Among the various trophies competed for are those presented by the President of the Republic and other personages, and the principal railway companies. Cricket has also become a pastime, and there are nine principal clubs in the republic. Golf is also making rapid progress in Argentina, and has been

taken up by members of many of the leading Argentine families. The Argentine Golf Club has a large membership, and, although one of the most recently formed clubs, is one of the most wealthy. Excellent links are to be found also at San Martin, Hurlingham, Lomas, Quilmes, Fisherton, Cordoba, and Mar del Plata, all of which are much patronised. Among the numerous trophies annually in competition may be mentioned those given by the Central Argentine Railway, the St. Andrew's Society, and others.

The lottery is a prominent institution in Argentina, as it is in all the Latin American republics, from Mexico to Chile. The streets resound with the cries of ticket-sellers, vending their wares at prices to suit all purses, and a show of morality is given to the institution by the handing of a percentage of profits to the hospitals and other charitable establishments. The system of performing the *sorteo* or drawing in public, and of selecting some unknown individual from the crowd to perform it, such as is generally adopted, is pointed to as ensuring the impartiality of the operation. Every inducement is held out to the population of Latin American cities to indulge in gambling in the form of buying lottery tickets, which are exhibited everywhere. In Buenos Ayres 30 per cent. of the proceeds of the sale is divided between the government and the lottery agents.

The theatre is the chief amusement of the upper classes, and theatres generally fill a prominent place in the architecture of the capitals : buildings often of costly construction. On important occasions the higher social elements crowd the theatres, the ladies in Parisian gowns and wearing jewels in profusion. Buenos Ayres has become one of the most important markets for diamonds ; an evidence of its growing wealth and the love of show of its plutocracy. As regards its moral life and its *demi-monde*, the Argentine capital goes the way of all wealthy cities. It has been one of the principal markets of the " White Slave " traffic, and has suffered serious indictments in the foreign press in connection with the matter of the protection of women.

In certain respects the Argentine capital may be likened with Chicago. It has the same characteristics—a great

food-producing centre, situated on a flat plain, with a system of scientific meat production, an absence of the picturesque, and a marked materialism—elements from which have sprung great wealth. Doubtless these matters will lead towards ultimate refinement and art, as time goes on. Buenos Ayres possesses handsome seaside and health resorts, notably Mar del Plata, with a fine sea beach, where the season in the month of March is known as the " Mes de los Ingleses," in reference to the numerous English visitors.

In Buenos Ayres the phenomenon of high cost of living, common to all American countries, is especially notable, and the European immigrant finds that the ideal of a home as he understood it in the land of his birth is greatly modified. Rents for houses, which, although they may be garishly stuccoed and ornate outside, have little but bare walls inside, are such as would not be paid in England for a comfortable house replete with modern appliances. House property in Buenos Ayres, and throughout Latin American capitals generally, is looked upon as a speculation rather than an investment, and rents and costs rise accordingly. Towards the close of 1912 public opinion on the high cost of living culminated in a mass meeting in Buenos Ayres, before the House of Congress to protest against the increase, and a petition was sent to the President asking for a reduction in the tariff against imported necessaries, the lowering of freight rates on consumable articles, the erection of 10,000 workmen's dwellings, and the voting of a sum of money for paving and other public works to provide work for the unemployed. Thus do the evils of the Old World tend to become reproduced in the New under existing conditions. The war has intensified these matters.

Whilst the wealthy element in Buenos Ayres is finely housed and catered for, provision for the dwellings of the poorer part of the population is insufficiently considered. Away from the better quarters of the city, the streets are squalid and unsanitary. The magnificence of the boulevards and public buildings gives way to poverty-stricken dwellings and dusty or muddy, unpaved roads, which merge into the brown and uninteresting plain on which the city is built.

Miserable huts and shanties of dried mud, covered, when their owners can afford it, with corrugated iron form the habitations of the poor of Buenos Ayres. The capital cities of Latin America always present a marked contrast of rich and poor. The greatest care and skill are lavished on costly public buildings, private mansions, boulevards, and electric lights: a background against which stands silhouetted the incongruous figure of the hungry, half-clad, and ignorant peon or Indian, who at the bottom of the social scale is in reality the main producer of the country's wealth.

Taxation in Argentine, as in Brazil and elsewhere, contributes toward the high cost of living: whether national, provincial, or municipal. Under the system in vogue every article of food and clothing is taxed, whether it comes from the provinces or from abroad. The city of Buenos Ayres imposes taxes on various articles and goods from the outside provinces, in the form of octroi dues collected at the city gates. Vegetables, eggs, fish, meat, bacon and other matters are subject to the tax. Advertisements are also taxed, and other minor matters. Commercial travellers are taxed in Argentina—as throughout Latin America generally—for the privilege of introducing trade into the country, government fees being imposed by the Board of Trade, or its equivalent office, on all bringing in samples. The amount of the tax varies according to the class of goods dealt in, and the province in which the commercial travelling is done, and fluctuates between 100 and 600 dollars. To some extent this inter-state taxation is a necessary concomitant of federal government and is a protection to local industry, and certainly cannot be condemned indiscriminately.

The city second in importance after the capital is Rosario, situated on the Paraná River, 170 miles by water and 186 by railway from Buenos Ayres, with a population of 300,000. Rosario was a mere village until the middle of last century, and its growth has been rapid since that time, and it now reflects, on only a somewhat smaller scale, the activities of the federal capital. It contains the largest sugar refinery in the country. The city is an exceedingly important commercial centre, with a large export and distributing trade,

and the network of railway lines connecting it with all parts of the republic is constantly growing. These lines give connection with Cordoba, Mendoza, and the Chilean frontier, also with Salta, Jujuy, and the Bolivian frontier, and traverse a wide area of territory, rich with produce and commercial opportunities. Improvements in the port works are being carried out at considerable cost.

The city of Cordoba has a population of 50,000. It is surrounded by beautiful mountain scenery. The famous university, founded in 1613, forms the principal educational centre of the republic, and the observatory constitutes the city the "Greenwich" of Argentina. Mendoza has a population of 40,000, Tucuman 60,000. La Plata, on the estuary of the River Plate, a great meat-shipping port, has 100,000. Other large towns of Argentina are Santa Fe, with 40,000 inhabitants, and Paraná with 35,000. There are ten or more towns distributed over the great belt of territory served by the railways, with populations of 10,000 to 20,000 people.

Argentina is a centre of considerable newspaper activity, and the Press, represented in the main by the Buenos Ayres newspapers, is the most important in Latin America. The two principal daily papers have, it is stated, a circulation of more than 100,000 copies ; they contain cabled news from all over the world, and the difference in longitude and consequently in time enables them to appear several hours earlier than the European papers. In addition to the daily news, articles by European literary men are a constant feature of their columns. The readers of the Argentine papers are in the main mostly interested in Italy, Spain, and France, the lands of their origin or association, and the news from those countries predominate ; but, in addition, every nationality in Buenos Ayres supports various newpapers in its particular language. Of the periodicals published in the city, 214 are in Spanish, 22 in Italian, 8 in German, 10 in English, and others in Scandinavian, French, Russian, and Basque. The general tone of the Press is somewhat sensational, and more "American" in character than European. Politics, however, do not generally predominate, as political

questions are but little defined in Argentina, and individuals rather than principles form the rallying-points of partisan feeling ; a condition which is notable throughout the Latin American republics generally. There are altogether 280 papers in Buenos Ayres, and it is not too much to say that the leading examples of the Press in that city would be a credit even to the most advanced nation.

No real political parties exist in the Argentine republic, as understood in Europe. The questions of tariffs in countries such as derive their main revenues from custom house dues is not a political one, protective tariffs being regarded as almost unassailable matters. In Argentina, as in Latin America generally, the matters of land tenure, taxation, and government cannot escape being made the subjects of party strife in the future. The extraordinary party feeling which runs so frequently to bloodshed in the Latin American republics is not generally a result of disputes regarding any fundamental principle concerning good government or the progress of the masses, but is brought about chiefly by personal ambition and reprisals.

The development of strikes in Latin America is a sign of the industrial awakening of the mechanic and artisan class, who have learned from their European and North American brethren. Serious strikes and stoppages on the Argentine railways frequently take place. January is the commencement of harvest time, and is generally regarded as a good opportunity by the working classes for declaring a strike. Demands have been presented by the railwaymen on various occasions requiring certain improvements regarding working hours and pay, and some of the companies oppose these matters strongly. The labour organisation in Argentina is a strong one, and the strikes often affect the whole railway system of the country. Drivers and firemen, with the other members of the " Fraternidad "—or the Socialist Brotherhood—number many thousands. Stevedores and sailors on river steamers often strike in sympathy, and the Socialist party support them. The drivers consist mainly of Englishmen and Italians, and the railway companies, both British and French, act together against their demands. Passenger

and goods traffic suffer severely, and heavy losses are incurred in railway revenue. The strikes are often prolonged, due to their receiving a certain measure of political support. The government endeavour to bring these matters to arbitration, but although substantial results have been obtained by the men, no finality can yet be expected, and the foreign shareholder is increasingly perturbed as regards his dividends. The position of the men in Argentina is very different from that of the same class in England. The wealthy classes and agriculturists control the bulk of the voting power and are strongly represented in Parliament and the government of the country: and labour has yet to establish itself in a position of strength such as would enable it to enforce its demands. The wages paid to railway men in Argentina do not follow any uniform standard, but vary considerably, according to local conditions. The general scale provides for an eight-hour day for drivers and firemen of passenger trains, and ten hours for freight trains, with drivers' pay fluctuating between £14 and £20 per month, and firemen's £8 and £14. The men demand higher pay, and that no driver of a passenger train should travel more than 150 miles per day, and should have twelve hours' rest after his journey, with the opportunity of returning to their homes once in every six days. It is to be recollected that the speed of trains in South America is slow, and that the cost of living in Buenos Ayres is exceedingly high. A law known as the Social Defence Law exists in Argentina, under which strikers or their leaders disturbing the peace of the country can be punished or deported. This brief description shows that the industrial development of Latin America carries with it the inevitable industrial disturbances and the conflict between capital and labour, which are likely to grow rapidly in the future. The position of capital is much less secure than in Europe or the United States, and as labour becomes better educated and learns to organise itself, it is highly probable that it may obtain the upper hand: also that Socialistic elements in government will increase.

An agrarian movement for the better enjoyment of the land by small farmers has taken place in Argentina. Much

of the land is held by this class from large landholders, and payment made in a percentage of crops, which have been shown to be excessive. In 1912 the methods to obtain redress produced something like anarchy in certain western regions of the republic, and the government were forced to interfere, and various projects were presented to Congress. In the province of Buenos Ayres, it was proposed that the 100,000 acres of fiscal land remaining should in part be sold as small farms to bona fide colonists, on long terms of payment, the price in instalments being equal to the rent paid.

The matter of insufficiently administered justice in Argentina is serious, and has been dwelt upon elsewhere. In certain instances the governments of provinces in Argentina have been found systematically corrupt, as a result of investigations made by the federal government following upon complaints by the inhabitants. Public offices and lucrative positions have been held by the governor and his friends, public elections have degenerated into farcical manipulations, and bribery, and trickery practised to prevent opposition. Radical and Socialist victories at the poll are becoming more frequent. Voting under a new law has become obligatory, and in Buenos Ayres during an election of April, 1912, 104,000 electors voted, out of the 120,000 citizens on the military roll, upon which the electoral register was based. In some of the provinces Radicals were also successful, but in many of them the governors followed their usual practise of securing the election of their own nominees. Bribery was practised to a certain extent, but the ballot being secret the results of attempted bribery were of doubtful efficacy. There is a marked awakening of the civic spirit, which may lead to a growth of Radical power. But the growth of democracy must be coupled with high ideals, or otherwise "Tammanyism" will become dominant.

The republic of Argentina owes its fame and prosperity mainly to the rapid advance of its great agricultural and pastoral industries. Prior to the year 1880, the only demand for Argentine live stock was in the home-curing of jerked beef or *charqui*, for the markets of Brazil and Cuba; and the production of wheat and maize did not suffice for domestic

requirements. But a very different picture is presented at the present time.

After the campaign against the Indians in 1878, which rendered the pampas more secure, the government lands were offered for sale at auction. The reserve price of these valuable lands was placed at £80 per square league (equal to 6,670 acres), with the purpose of encouraging development. A rapid growth of the pastoral industry followed; and in 1908 the census of live stock shewed 29,000,000 cattle, 67,000,000 sheep, 7,500,000 horses, 1,500,000 hogs, and 4,250,000 mules and asses. When it is recollected that the progenitors in America of all domestic animals were exotics, it will be seen how remarkable has been the adaptability of South American soil to these animal colonists and their descendants. The first sheep were introduced into Argentina in 1550, followed two years later by seven cows and one bull. There now are more than a quarter of a million establishments in Argentina maintaining flocks and herds, covering an area of more than 65,000 square miles, and representing a calculated value in land and stock of nearly 4,000,000,000 gold dollars.

In 1900 the British ports were closed to the import of live stock from Argentina, due to foot and mouth disease; and this import—which had decreased from 382,000 head of beef and 512,000 sheep in 1896 to 150,500 and 198,000 head in that year—fell further. On the other hand, the export of frozen and chilled meats increased; the frozen beeves exported in 1908 being 574,000 and 3,300,000 sheep. In 1920 the exports of frozen beef were 4,550,000 quarters, chilled 630,000 quarters, and frozen mutton 1,194,000 carcases. In 1908 the export of wool was 165,000 tons, having declined from 237,000 tons in 1899. Whilst the totals have declined, it is held that values have not; these having been increased by improving the breed and quality. In 1906, 2,180 Durham cattle were imported for breeding purposes, and 6,500 Lincoln sheep; as well as other staple varieties of cattle and sheep. High praise is accorded to Argentina for classes of cattle exhibited at the national cattle shows,

bred both from sires imported from England, and from Argentine stock. The best beef-producing types are raised, and the large number of prize exhibits and the general excellence of the stock show the possibilities of the industry under scientific methods. These conditions have attracted the attention of the North American meat trusts, whose agents have entered upon operations in Argentina, especially in refrigerating and slaughtering establishments.

Strongly associated with agriculture in Argentina is the "Argentine Rural Society," whose position is of interest and importance. In the year 1866 a group of gentlemen farmers came together with the object of founding the "Sociedad Rural Argentina" with the following purposes* :—To foster and promote the development and the advancement of agriculture and pastoral and by-industries, to support all initiative in that direction, to aim at the betterment of agricultural and breeding methods, to hold exhibitions, promote scientific investigations, stimulate private initiative and help government enterprise, and generally to defend agricultural interests. The association began its task without much help from the corporation of breeders, but it rendered important services to the country in publishing useful information in its bulletin on rural and pastoral topics, and bringing measures before the government; and it is now directly engaged in all branches of the pastoral industries. The society raised a subscription with which cattle were bought and sent frozen to Europe for a trial; the first trial did not prove satisfactory, but the society continued its propaganda; and four years after, in 1882, the first Frozen Meat Company was founded. In the year 1875 the society held its first show: a modest beginning which was regarded with some indifference. Only 79 horses, 18 head of cattle, and 79 sheep were exhibited: and the total sales only reached 10,500 dollars gold, which is less than the price paid in 1909 for the champion Durham bull. After the year 1876 the shows were held in the grounds of the society at Palermo, where large pavilions and stands have been erected, transforming the show grounds into a model of their kind: and

* *The Times* South American Supplement.

the value of the sales increased yearly to 1,578,000 dollars gold in 1909.

The export of live stock and frozen meat convinced the breeders of the necessity of obtaining a model beef type. Large zones of alfalfa, or lucerne, were opened for the breeding and fattening of refined cattle. The immense pampas, which in their primitive state could support only a small number of herds, are now, due to the cultivation of alfalfa, which flourishes well there, being converted into good pasture lands for the breeding of fine stock: and the lands of the Central Provinces have multiplied their yielding capacity more than tenfold since the time when the herds roamed over them in their original state. The native bony, but resisting, stock has been bettered with the finest animals obtainable from British farms. The Argentine Republic has in the last twenty years contributed in this way not less than 6,000,000 dollars gold towards the prosperity of British cattle-raising. Many thousand head of breeding stock have been imported during those years, Shorthorns being the most numerous. One of the most useful tasks accomplished by the society for the advantage of cattle-raising was the opening of genealogical records for all breeds having a record in their country of origin, with a Herd Book, Stud Book, Flock Book, and Swine Book. In these records 94,536 animals were registered up to October, 1909. The Argentine Herd Book was opened in 1888 for Shorthorns and Herefords; the Flock Book in 1893 for Lincolns; and the Stud Book in 1907. The Jockey Club possesses a Stud Book for registration of thoroughbred horses exclusively. Before an imported animal can be entered in the Argentine Shorthorn Herd Book, it is essential that the pedigree be traced to 1850 or earlier. In 1919 60,500 head of beef were imported.

Whether the limit has been approached for the great pastoral industry in Argentina, or whether it will continue to increase, has been the subject of discussion. The most recent census shews a decline in live stock since 1908. The number of head of cattle given by the last census (in 1917) was 27,000,000; of sheep, 44,850,000; horses, 9,050,000; hogs, 3,380,000; mules and asses, 855,000. Heavy losses

by reason of droughts, disease, and other causes have occurred. In some provinces there has been a decrease, due to the wasteful and indiscriminate killing of cows. In 1911 4,000,000 head of cattle were slaughtered for domestic consumption and 1,000,000 for foreign markets, and doubts have been entertained as to whether herds are being conserved with sufficient prudence. The price of Argentine meat has fallen considerably since 1908, the average price in London at that date having been 19 cents per pound, against the ruling average for 1911 of 16 cents, with large consignments at a much lower figure. Possibly Argentina, whilst remaining a valuable source of world-supply, has reached its limit.

The great pampas of Argentina, the *campo* where the basis of the life of the republic lies, has its own special atmosphere and character. The gigantic herds of cattle that have been brought to being and the peculiar personality of the *gaucho*, the primitive horseman whose life is passed in driving and tending them, have become synonymous with the life of Argentina, the great cattle industry to which the cities are but secondary. The monotony of nature is reflected in the monotony of the life of the region. To be a reservoir for the production of meat and wheat for distant nations, receiving in return their gold, a relatively small part of which filters on to the pampa through the intercepting medium of Buenos Ayres, is the present destiny of the land. The dweller in the *campo* has little means of escape from the plains life. The vastness of the surroundings, the badness of the roads, the great distance between dwellings, the only method of overcoming which is the primitive one of the horse, the boundless, empty horizon, upon which even a house or a horseman stands out as something welcome in the monotony, all have their effect of silence and reserve. The roads, if such they may be termed, are bordered by endless miles of wire fencing, and form tracks either of dust or mud, according to the time of year; for on the alluvial plains material for road-metalling is not to be obtained. Travelling by motor car is slow on such highways, and better progress is made on the prairie itself. On the great cattle ranges or

Photo *Underwood & Underwood*

GAUCHOS SKINNING CATTLE ON THE ARGENTINE PAMPAS

estancias, where natural pasture is the only form of fodder, as is the case with the majority of the estates, the vast herds of cattle exist almost automatically, with little time or labour expended upon them. The cattle are not housed as in colder climates, and they bear the full brunt of the scorching sun or piercing wind. Three great scourges afflict the land at times: drought, locusts, and storms. If the rain fails, death is the only escape from thirst for myriads of beasts; the consequence of the bringing to being of multitudes of cattle upon a territory where nature itself has not provided either food or water for them. The castigation of drought falls with terrible suddenness on the great pampas, and at such seasons harvests, grass, and forage fail, and if with the spring the rain does not fall, the plains are strewn with dying or rotting cattle—a lamentable spectacle. It is impossible to feed artificially herds so vast, and equally impossible to bury them when dead. The inhabitants of the cattle farms do not trouble themselves to bury dead cattle, and the carcases are left, to mummify under the action of the wind and sun, or to putrefy amid flies and dust; and these matters are disagreeable features of Argentine life on the plains.* Thousands of animals perish upon single estates in times of drought, and it is difficult to excuse a system which is so prodigal of animal life. Under such conditions it is not to be expected that fine cattle are the exception, or rather that the specially fed and bred varieties are the show cattle of Argentina. As regards horses, the breaking in of these is often primitively brutal in its methods, as indeed is the management of all kinds of animals in the hands of the Latin American, who is far from being a merciful man to his beast. The horse and the ox have a heavy reckoning to settle with the Spanish people. These are the drawbacks of what is a valuable and colossal industry, useful to the country and the world at large.

The enormous estates of the pampas, some of them containing a hundred square miles of land, must give way in time to smaller holdings; and legislation tends that way.

* These circumstances among others impressed Monsieur Clemenceau, as recorded in his book on South America.

At present the contrast between the luxury of the home of the wealthy *estanciero* and the primitive condition of his lands, cattle, and dependants is probably more marked than in any other land. Agricultural feudalism in the new world, from Mexico to Argentina, dies slowly, and the great estates must be regarded as centres whence rural civilisation makes its way somewhat as it did in the times of the feudal landholders of Europe, Probably, however, it is destined to a shorter continuance. The standard of life of the cattle-labourer in the Argentine would, however, compare favourably with the agricultural labourer on an English farm.

The cattle of the Argentine were originally of the Spanish long-horned variety, and not of much value for meat, but as the pastoral industries developed the Durham, Shorthorns, Hereford, and other British stock which were introduced have greatly improved the breeds among the well-tended herds. Dairying industries are acquiring importance following upon the importation of Jersey and other cows ; and butter and cheese-making have been brought about. In the year 1910, 61,000 cases of Argentine butter were exported. To the coarse and hard grasses of the natural pastures in some districts, great improvement has been made, permanent pasture of excellent quality being created, and hay also has become an article of export. Ploughing the pampa and irrigating and sowing with alfalfa is being more and more adopted as availability of labour and water supply increase ; thus turning portions of the desolate semi-arid plains into fields and plantations, which has its beneficial effect both upon the live stock and upon the human inhabitants of the Argentine *campo*.

The pastoral wealth of Argentine owes much to the system of cold storage, the science of conveying chilled and frozen meats overseas to Europe. The inspection of animals for this important trade has been made a matter of governmental concern and regulation, and the practical and scientific methods employed are perhaps superior to those of any other lands. The Minister of Agriculture, into whose department the matter enters, has scientific advisers and numerous inspectors engaged upon the work. The reve-

lations made a few years ago in the American meat-packing industry show, however, the necessity for the most stringent methods, and the danger that private interests may act adversely to governmental theories. The rapidity with which Argentina has passed the United States in supplying beef to the United Kingdom, due in the main to the increasing home consumption in North America, is shown by the fact that in 1901 Argentina exported to Great Britain only 40,000 cwts. of beef against nearly 3,250,000 cwts. exported by the United States; whilst in 1911 the latter country sent only 174,000 cwts., and Argentina 3,750,000 cwts. The future expansion of the Argentine meat trade depends largely upon the matter of the high custom dues into most European countries. If these become lowered the trade should increase largely. A heavy tax is imposed by Germany upon imports from Argentina, and frozen meats are entirely prohibited entry: measures which the exponents of protective tariffs claim as necessary to the home interests of the Empire. How long this condition will continue it is of course impossible to forecast, but it involves certain contradictory conditions. The advocates of "free food" in Germany state that importation of Argentine meats would be of benefit to the poorer classes, who suffer severely by reason of the dearness of meat. Also, German trade with Argentina is important as an outlet for manufacturing interests, which run the risk of reprisals by that republic, which reasonably might insist upon some form of reciprocity. The United States similarly tax goods from Argentina, and are equally subject to some form of retaliation.

Agriculture has shown a growth in Argentina no less remarkable than the pastoral industries. In 1895 there were under cultivation 12,000,000 acres of land, which grew to 45,000,000 acres in 1908. In 1919–20 the area was 58,000,000. Of this 15,000,000 are in wheat, 8,000,000 in maize, 21,000,000 in alfalfa, 2,000,000 in oats, nearly 400,000 in flax, with 237,000 acres in sugar cane and 300,000 under vines. The yield of wheat was 4,670,000 tons; maize, 5,696,000; wheat and flour export, 4,000,000. It is calculated that there exist 175,000,000 acres of land suitable for

cereals, an enormous area; and it is held that production increases in greater proportion than population. Agriculture in Argentina, whilst it is a powerful industry, suffers from some deterrents of a serious nature. The best and most accessible lands are in the hands of large owners, to whom the actual farmer pays rent, which is paid largely in a percentage of the crops raised. A succession of good years tends to increase the rent under the system; whilst, when consecutive bad seasons occur, the farmer may move elsewhere, which is conducive to instability. The average yield of wheat in Argentine soil is only 12 or 13 bushels to the acre, and methods of cultivation are in some respects crude. The broadcast sowing machine is generally employed for wheat and linseed, but the advantages of the drill are being recognised as more suitable for the condition of moisture in the soil, and as effecting an economy in the amount of seed used. The Argentine farmer is greatly dependent for his existence upon grain, and if his cereal crop fails the farmer has no resources to tide him over. The yield of maize in good seasons is slightly under one ton per acre, which in poor seasons falls to half that amount. The carriage of cereals forms an important source of revenue for the railways, which suffer loss in lean years.

In the year 1911 the maize crop was a failure, but in 1912 yielded largely, and some 4,500,000 tons were available for export, out of a total production of 7,500,000 tons. The average maize export is 2,000,000 tons, and Argentina thus supplies about half the total maize exports of the world, which is approximately 4,250,000 tons. North America, with an enormous output of 64,000,000 tons (in 1911) exports less than 750,000 tons, after providing for home requirements. The value of Argentina as a food supply for export is thus evident, but it is likely in the future to follow the same course as regards home consumption as the United States. The Balkan States, Austria, and Russia in 1911—as a measure of comparison—produced 5,000,000, 4,000,000, and 2,000,000 tons respectively of maize, with an available export of 1,250,000 tons.

The wool-producing industry is mainly carried on in the

province of Buenos Ayres, Entre Rios, Cordoba, Santa Fe, and Corrientes ; and in the cold regions of the south, upon the national lands of Patagonia. In 1908 the value of the export of wool (175,500 tons), reached £9,374,000. The wool is purchased principally by agents of French, German, and Belgian manufacturers, but some Lincoln fleeces are sent to Britain and the United States. The extensive plains of the southern territories are growing in value as sheep areas ; and are similar in character to the Falkland Isles, famous for their sheep industry.

The possibilities of cotton cultivation in Argentina, on a large scale, are receiving more attention, and the region of the Gran Chaco territory is that which especially offers the necessary conditions of soil and climate for the successful growth of the plant. On the existing cotton plantations in the Gran Chaco, the rich, black alluvial soil is similar in character to that of the Mississippi valley in Louisana, and yields vigorous and productive cotton plants ; and these great plains appear to offer an excellent field for the extension of the industry of cotton growing in South America. A very extensive area of this class of land is available, but suitable labour will have to be attracted to the region before production on a large scale can be entered upon. Instruction in cotton culture is provided in the district by the National Agricultural school. The Argentina cotton crop comes to an end in May ; the American begins in August, which circumstances are favourable to the Argentina industry. High prices have been obtained for Argentine cotton, and a satisfactory profit made upon its cultivation ; and it is proved that these great regions of the Argentine Chaco might add considerably to the world's supply.

Typical of a particular kind of agricultural condition is the province of Mendoza, the California of the Argentine republic : a region, with an area of 54,000 square miles and population of about 200,000 inhabitants. The capital of this province is the town of Mendoza, situated on the slope of the Andes at 2,300 feet elevation above sea level. Mendoza is a pleasing and well-appearing town, and the prosperity of its surrounding agricultural resources is due to the

irrigation of the land, by canals drawing water from the eastward-flowing rivers fed by the melting snows of the Cordillera ; which give life and fertility to the vineyards. The vineyards cover a large area of land and form properties valued at many millions of pounds, containing upwards of 1,000 bodegas, or wine-producing establishments. The fertility of the soil under artificial irrigation in this region and the temperate climate favour in addition the production of olives and fruits of various kinds, whilst alfalfa and cattle-raising are only secondary to the viticultural interests. To the province of San Juan the heavy snowfall in the Andes comes in the nature of salvation, and during 1912, water for irrigation was plentiful, and resuscitated vineyards and fields which had been long abandoned by reason of the drought. The same snowfall, however, blocked the Trans-Andean railway for months. Extensive irrigation works, dams, and flood-control works are to be carried out by the national government in the San Juan river.

To the north of Mendoza lies Tucuman, the centre of a great sugar-producing region, which extends for a considerable distance upon the western plains of Argentina. In the various provinces of that region exist a number of factories producing sugar, thirty of which are at Tucuman, whose prosperity is based upon sugar production. More than 130,000 tons of sugar per annum are refined in these establishments, and great quantities of alcohol are produced, yielding an excise duty of 16,000,000 dollars per annum to the government. There are more than 175,000 acres of cane under cultivation, and the town of Tucuman contains nearly 60,000 inhabitants. Great wealth has been made by individual plantation and factory owners in the industry of sugar production : one of whom recently left a fortune of 100,000,000 dollars. The factories are equipped with modern machinery, and a large number of hands are employed.

The law concerning sugar production in Argentina is of some interest, as showing the endeavour on the part of the government to balance production with consumption. Due appreciation has been shown by recent legislation to the

value of the industry to the country and of the necessity for encouraging it, and the recent customs law provides for the maintenance of a duty on imported sugar. This was placed at nine cents per kilogram for a period of ten years, subject to a diminution of one-fifth of a cent per annum; and the fiscal protection has been beneficial to the producer, and is held to be a safeguard for the consumer against high prices. Further, the amount of sugar that it is permitted to import is limited to the amount of the estimated shortage in the local crop, and this is to be agreed upon in advance by arrangement between the government and those concerned in production and importation. Formerly the government had the right to reduce the import dues whenever the price of sugar rose, and within certain limits they retain this right. With the rapid growth of population the difficulty has been to supply the domestic demand, and the factories enjoy an active local market. Vast areas of land are still available for cane cultivation, and the country should remain self-supplying. The extending of the cultivated area depends, however, largely upon availability of labour and the cost of wages. British capital is employed to some extent in the Argentine sugar industry, principally in the estates lying some 200 miles to the north of Tucuman.

The sugar industry in Argentina is an important branch of rural activity: but the condition of the workers, who produce this wealth, and among whom there is a large proportion of Indian labour, leaves much to be desired. The workers draw little advantage from the riches they have helped to create. Their dwellings are generally barracks, or shanties of mud or wattle, forming sub-tropical slums of the worst description, from which the most rudimentary elements of sanitation and comfort are lacking. In Argentina agricultural labour is practically unprotected by the law; there are few regulations to secure the workmen against undue advantage on the part of the employer; laws such as in Britain have been fought out by painful degrees. The contrast between the luxury of the wealthy estate and factory owner and the poverty-stricken labourers

is very marked in the rich and thriving republic of Argentina ; scarcely less so than in the poorer Latin American countries, where the worst forms of negligence and oppressions are visited upon the proletariate. The only redeeming feature of agriculture in this region, from the sociological point of view, is the mild climate, which enables the native worker to dispense with substantial dwellings and other necessaries of harsher climates. This condition, however, is not likely to be productive of an advanced civilisation.

Among the most severe plagues of Argentina are dust storms and locusts, following upon the droughts. The dust, it is true, attests the fineness of the alluvial soil, but is a source of great discomfort. The locusts are a severe scourge at times, ravaging the cultivated plains and devouring every green leaf, after the manner of the same plague in Algeria. Coming from almost unknown sources, clouds of locusts descend suddenly upon the land, and within a few hours nothing remains ; and crops and gardens, the work of a whole season, are absolutely destroyed. The government of Argentina spend large sums of money in the endeavour to contravert the mischief done by these insects, but no efficient remedy has yet been discovered. The primitive mode of driving the locusts away by creating a din upon their approach, by beating pots and pans or any other method, is sometimes employed, but this simply turns them from the one plantation to a neighbouring one, and can scarcely be regarded as an economic or an altruistic remedy. It is to the wild and impenetrable region of the Great Chaco that the origin of the flights of locusts is traced.

Seen from the window of the train, Argentina is for the greater part very flat, the traveller who journeys by railway from Buenos Ayres to Rosario, proceeding thence to Tucuman, and returning by Cordoba may acquire some knowledge of the character of the northern half of the republic. Buenos Ayres is left early in the morning and Rosario reached early in the afternoon. The journey is over a country as flat as a table, divided into large fields of pasture, wheat, or maize, with here and there a solitary white-washed house, surrounded by young trees of a peculiar species which is

immune from the voracity of the locust. During the periods when the Argentine has suffered much from its two enemies, the drought and the locust, the effects of the former are sufficiently visible, not only in the dried-up appearance of the land, but in the numerous carcases of dead horses and cattle lying along the line. The locusts may not always appear in those dense columns which darken the air, but they may be as thick as the flakes of a snowstorm. They swarm in at the open window and alight on the passenger; and the Argentino crushes them with vindictive pleasure. The remedy for the locusts is the wind that sweeps them away, as far as local feeling is concerned. A belt of what is practically a dusty desert region extends from east to west to the north of Cordoba and Rosario, and before the advent of the railway the trade from Tucuman was conducted by caravans, which set out in one year and returned during the next, the going traders meeting the returning ones in the market-place of Rosario. It is stated that whole caravans perished at times, in those earlier periods, from thirst in the dry country or at the hands of the Indians, who then waged war against the settlers and traders; and the scenes and method of this early commerce were almost Arabian in character. Tucuman under the early Spanish rule was an important place, and under the mandates proceeding from Spain all trade was compelled to take the route lying through the town, and through Salta, to the north, in order that all commerce should be conducted from South America through Peru. The town contains the hall in which the independence of the republic was proclaimed. Further important irrigation works are being considered in this part of Argentina, as an offset to the effects of drought.

The northern region of Argentina, comprising the provinces of Tucuman, Salta, Jujuy, Santiago del Estero, Corrientes, and the territories of the Misiones and Chaco is, as shown, endowed with considerable wealth and capable of extreme development. This region lies between latitude $21\frac{1}{2}^{\circ}$ and 30° south, that is, in the sub-tropical zone, entering the tropics in the northern part; and its area embodies some 20,000,000 acres of land, including about 35,000

square kilometres of forest. The population and cultivation of the region is, however, concentrated in a very small area. The land, although of great possibilities, is not suitable for exploitation by individual settlers without agricultural skill and knowledge, and unaided by capital. When a better economic organisation shall take place the zone may become one of the best and richest of that latitude in any part of the world. The province of Tucuman has an area of 27,000 square kilometres, flat in the east and mountainous in the west, well watered, irrigable land, but only 140,000 hectares are cultivated, 65 per cent. with sugar, and 19 per cent. with wheat. Fruit, vegetables, timber and live stock production are other industries. The production of sugar is given as $2\frac{1}{4}$ tons per hectare, equal to about one ton per acre. The province of Salta and Jujuy cover an area of 164,000 square kilometres, with a population of only 250,000 persons, notwithstanding the possibilities of the region. On the heights the mineral resources are unexploited, and the excellent mountain pasture could support herds of live stock. Timber and fuel are plentiful ; mineral waters of therapeutic properties, the equal of any, are found ; and in the valleys fertile lands with abundant streams, both for purposes of irrigation and power abound, with possibilities for cultivation of the products of the temperate and sub-tropical zones. Grain and alfalfa give excellent returns, the sugar cane is prolific, and coffee and bananas are other useful products. Endeavours are being made by the government to bring this region into more rapid settlement, and certain facilities are being provided, of which advantage might be taken by co-operative groups. Railway transport is requisite, however, and attention is being turned thereto ; and this part of South America is capable of rapid development.

There is a growing amount of British capital employed in the interior lands of Argentina. A company known as the Forestal Land, Timber and Railways, which has been in operation for some years, acquired 1,250,000 acres of freehold timber land in the Chaco district, and possesses some mileage of light railway and cattle ranches, also tanning

plants. The well-known quebracho timber used for tanning furnishes a valuable article of export from Argentina and grows largely upon the estate. The reports of the company have shewn very considerable profits in certain years. Another British enterprise, the Argentine Southern Land Company, has also reaped good returns on its capital. The business includes live stock, wool sales, farm crops, alfalfa, etc., and large quantities of wood and many thousand head of cattle are sold. Some losses occurred from the severe weather in the Cordillera. There are other British land companies engaged in stock-raising and wool growing in this region owning valuable lands. The Santa Fe and Cordova Great Southern Land Company, another British enterprise, has paid excellent dividends, and deals in large herds of live stock. In 1912, for the first time for many years, the estate had been free of locusts: large additional areas had been planted with alfalfa, and five more mills erected, and wheat and linseed were harvested. Foot-and-mouth disease caused some ravages among the cattle. The foregoing enterprises shew that foreign capital is not neglecting South America, in matters of landed estates. Indeed the inducements to foreigners with capital to take up land in this continent are very considerable, but it is probable that nationalistic legislation will curtail these in the future.

A remote territory of Western Argentina which awaits fuller development is the district of Formosa, and much may be expected of it in the future. Agriculture and stock-raising are the principal industries, the most flourishing centres of which overlook the Pilcomayo and Paraná rivers: the region being one of considerable economic independence. Extensive zones of desirable territory parallel these rivers, with favourable condition of soil and climate. Further means of transport, however, are necessary to the growth of the region, as elsewhere in this little known part of South America.

The territories of Misiones, the Chaco, and Formosa are all of future importance. The Misiones territory has, however, a past as well as a future, the story of the Jesuit Missions in early times in South America, from which it takes

its name—a history full of terrible and romantic interest. The Jesuits came as a result of a request preferred to the general of the order by Philip II, who was indignant at the entire ignoring by the Spaniards of Paraguay of the decree of Charles V, declaring the freedom of all the native races of South America, and was shocked by the tales that reached him of the fearful brutality of the Encomenderos—men who were licensed to reduce the Indians to submission and exact labour from them. The treatment of the aborigine was less brutal and terrible than in Peru, " but it was shocking enough to cause the Parani women to strangle their children at birth rather than to rear them to a life of suffering." The further history of the missions records the hostility aroused on the part of the Spanish colonists, by the measures taken by the Spanish sovereigns for their protection and that of the Indians. The missions were attacked by the colonists after the Encomienda system was declared illegal in 1608, and the slave-hunters slaughtered and drove into slavery Indian men, women, and children ; of whom, it is recorded, 30,000 were massacred and 60,000 sold as slaves in San Paulo. Many of them fled into more remote districts, and to-day the ruins of the mission churches appear in the jungle, all that remain of the once fruitful and prosperous settlements under the Jesuit Fathers. " What the territory grew then it should be able to grow now. With wheat the Fathers had not much success, as the quality grown proved poor ; but maize, sweet potatoes, mandioca, sugar, tobacco, and cotton were largely grown and with very great success. Vines were planted, and the mission wines soon attained celebrity. The *yerba*, from which the so-called Paraguayan tea was obtained, grew abundantly in a wild state ; but it was also cultivated and greatly improved. Of vegetables and such fruits as oranges, dates, bananas, and figs the soil was very prodigal. Stone quarries were worked ; and for a time some copper deposits were exploited ; but these were abandoned when the Jesuits began to realise that their power was feared. The Indians were employed not only in the fields and the forests, but also as carpenters, wood-carvers, stonemasons, builders, blacksmiths, bronze-casters,

instrument makers, and cloth spinners. When the properties were confiscated by order of Charles III, the live stock inventory showed the possession of 111,400 horses, 788,000 cows, and 225,000 sheep. Nearly 150 years have elapsed since then, and Misiones is yet far from having reached the point at which it stood on the fell day when the animus against the Jesuit Fathers was permitted to extend even to their noble work on the banks of the Paraná."*

Thus it is seen that the atrocities perpetrated on the unfortunate natives of the Paraná valley were as severe as the happenings in the Amazon valley during the same early times, and of the Putumayo recently.

The constant increase in the speculation and sale of land in Argentina reflects conditions to a certain extent similar to those which obtain in Canada. In a country possessing a soil and climate adapted for the cheap and abundant production of food stuffs, land inevitably forms the principal subject of monetary transactions. The "industrialism" of European towns requires more and more the importation of raw material, under present conditions, and this is reflected in land transaction in Argentina. The sales of land in the republic during the year 1911 were given as slightly under 28,000,000 acres, whose value was about £35,000,000; as compared with 29,500,000 acres and £24,000,000 in 1910: a fluctuation in area but an increase in value. In the ten years of 1902 to 1911 the total sales of rural property amounted to 252,000,000 acres, whose value was nearly £193,000,000; and the extent to which the interior of the country is being open up by this land movement is considerable. The average price of land per acre for the whole republic in 1902 was 10s. 2d.: and in 1911 £1 4s. 10d. This average, of course, includes the large transaction in the remote, cheap lands of the distant provinces; the average for the Buenos Ayres province being £4 16s. 7d.

South of the River Plate and pampas regions, and below the Rio Negro which roughly forms the dividing line, lies the enormous territory of Patagonia, covering the whole southern extremity of South America as both sides of the

* "Paraguay Missions," *Times* South American Supplement.

Andes, and in the possession both of Argentina and Chile. The Argentine portion is by far the greater, embracing the vast steppe-like plains which characterise the country between the Andes and the Atlantic, a territory with a total area approximately of 330,000 square miles. Notwithstanding the arid and often inclement character of this region, the valuable cattle and sheep farming districts are the seat of growing industries. Patagonia is a region of much interest. On the upper plains of Neuquen territory thousands of cattle can be fed, the forests yield valuable timber, and the river is of value for irrigation. Towards the Cordillera the soil becomes more fertile, and there are some mining districts. In the broad valleys vintage of some importance exist, with the famous Jesuit apple orchards. In the territory of Chubut there are vast stretches of fertile land and various colonies. The Welsh colony in the valley of the Chubut river was the first European settlement made in Patagonia, in 1865, when 153 families were landed, and each family received an allotment of land from the Argentine government on the river Chubut. For years, isolated and almost forgotten alike by Buenos Ayres and the home country, the Welshmen struggled on, but not till twenty years later, with the construction of a system of canals for irrigation, did the colony begin to flourish. At the present time it numbers about 3,000 Welsh inhabitants. The heads of many families are prosperous farmers, and some of them have amassed wealth. Rawson, the capital of the territory, is connected by railway with Porto Madryn, on Bahia Nueva. The principal cattle region of Patagonia is in the department of Rio Gallegos, and Port Gallegos bids fair to rival the Chubut port of Punta Arenas. The climate of Patagonia is less severe than generally supposed.

Off the coast of Patagonia, some 300 miles, are the Falkland Islands, which have been described as one of the dreariest of British possessions. Its characteristics are chilly fogs, squalls of driving rain, stormy seas, and a landscape without indigenous trees, generally bare and often uninviting: solitary but for the scattered sheep and countless birds. Over vast stretches lies the peat, green and wet or dry and

grey, through which quartz boulders thrust their sharp ridges. For a few weeks each year the land is scented by low-flowering plants that have escaped the sheep; the "Pale Maidens" shivering on their slender stems, "vanilla daisies," the creeping "almond plant," the lovely oxalis with its close folded leaves. Some 2,300 British colonists are settled, and some hundred of thousands of sheep find grazing grounds, tended by the lonely and weather-beaten shepherd. The Falkland Islands Company, engaged in sheep-farming, earns a profit on its capital. From the sea the islands are low, sad-coloured hills, defended by sharp reefs and girdled by a belt of the gigantic seaweed known as "kelp": and Port William, in the land-locked harbour of Stanley, shows drearily in the sleet-laden gales, which are a common feature of the Falkland climate. But Stanley is a clean-appearing little town, stretching along the south side of the harbour, mainly wooden houses with red iron roofs, each with its small conservatory and garden, and there is a general air of prosperity about the place and its inhabitants. Penguins and sea lions haunt the coast, and snipe, ducks, hares, and geese are abundant on the uplands. Excepting small government reserves, the whole of the land in the colony is in the hands of sheep farmers. Although these actually own little more than the grazing rights, closer settlement is thus rendered impossible, and in spite of the high wages paid for labour there is no opening for new settlers. Isolation and the absence of competition have exaggerated in the Falklander both the virtues and the defects common to the inhabitants of backward communities; but they are hospitable, cheerful, and law-abiding. As many as 100,000 sheep are boiled down annually for their tallow in this British colony—yet in London the price of meat for the poor still rises. The people of Argentina claim the Falkland Islands as theirs, and teach in their schools that the republic has been wrongfully despoiled thereof. The diocese of the Bishop of the Falkland Islands embraces the whole of the Pacific coast of South America, but not Argentina for political regions.

Mining in Argentina has not reached much importance,

but there are good mineral regions in some of the Cordillera provinces. The lack of coal is a drawback. Great petroleum beds exist, a continuation generally of those in Bolivia. From the mines in the province of Catamarca, shipments of tin amalgam from the ores of that district were made in 1912; the first commercial shipment of tin from Argentina that has taken place. Gold dredging promised at first great returns, but afterwards proved a failure.

The life and prosperity of Argentina and the future of agriculture depends greatly upon its railways. The railway system of the republic is the most important in South America, embodying more than 20,400 miles of line, built or under construction, as against 17,000 in similar conditions for Brazil. Taking Buenos Ayres as a centre and describing a semi-circle with a radius of 200 miles, more than twenty-five lines are crossed, all converging upon the city.

The Argentina railways have been financed in their greater part by British capital, amounting to a sum of more than £200,000,000 sterling. From Buenos Ayres a very extensive network of lines reaches north, west, and south. These lines may be divided into five systems, exclusive of the Entre Rios system of Uruguay. The Central Argentina railway embodies 3,000 miles of line, and stretches north-westwardly to Tucuman, serving the important cities of Rosario, Cordoba, and Santa Fe. It is a well-built railway, whose 23,000 or more shareholders are principally British. The country traversed by the line, in certain districts, will be brought into greater productivity by irrigation, hydraulic works for which are being developed. Other lines continuing this system give communication with the towns on the Bolivian border. The Buenos Ayres great southern railway embodies somewhat less than 3,000 miles of line, and covers the southern part of the province, which is generally flat and uninteresting in aspect, but highly profitable agriculturally: and in some sections near the capital, double and quadruple tracks have been necessary to accommodate the traffic. The line gives access to various seaports, and runs westwardly towards the Chilean border. The Buenos Ayres western has some 1,500 miles of line in

operation, forming part of the great network of lines west of Buenos Ayres. The Central Cordoba system, including 1,200 miles of state railway north of Tucuman, controls about 2,300 miles, and the Buenos Ayres and Pacific, which forms part of the transcontinental route, contains some 2,700 miles. Many of these lines are being lengthened and new ones projected, and the mileage in the republic is being constantly increased.

The principal Argentina railways are of different gauges, known as broad, medium and narrow, being respectively 5 feet, 6 inches, 4 feet 8½ inches and 1 metre. The broad gauge prevails, extending west in the Andean provinces of Mendoza and San Juan, and north to Tucuman and Santiago del Estero ; and on the south to Bahia Blanca and thence to Neuquen and the pampas territory. The medium gauge has been laid principally in the coast provinces of Corrientes and Entre Rios between the two, wide, navigable rivers, Paraná and Uruguay. The narrow gauge runs through the central provinces, Cordoba, Catamarca, and others, connecting them with the coast. The railway from Buenos Ayres to Valparaiso is the most interesting line in South America, traversing the continent from the Atlantic to the Pacific. South America at this point is narrow ; the total distance across, 888 miles, being less than that from New York to Chicago ; but the two cities joined may be regarded somewhat as the " New York " and " San Francisco " of South America. The line traverses vast plains covered with crops, or with alfalfa as forage for the bands of cattle, horses, and sheep which stud it, and reaches Mendoza, in the midst of the vine-growing district, lying at the foot of the Andes, 2,500 feet above sea level, and 650 miles from Buenos Ayres. To the south the line traverses further areas of vineyards and cultivated lands, until it turns westward and begins to climb the Uspallata Pass. At 10,338 feet elevation the line traverses a tunnel 3,460 yards long, and the uninteresting scenery of Argentina gives place to the snowy slopes of the Chilean Cordillera, with Aconcagua, 23,080 feet, and its surrounding snow-covered peaks. Upon the western slope the heavier rainfall produces a more verdant

landscape, and crossing this the railway reaches Santiago and Valparaiso, upon the Pacific coast. The Trans-Andean railway is an important, international highway, but it is doubtful if its present gauge and capacity will be sufficient for future developments. The line is further described in treating of Chile.

GROWTH OF ARGENTINE RAILWAYS

YEARS	LENGTH	CAPITAL	PASSENGERS CARRIED	FREIGHT RECEIPTS		EXPENSES
	Kilometres	Gold Dollars		Tons	Gold Dollars	Gold Dollars
1857	10	285	56	2	19	12
1865	249	5,379	747	71	563	438
1870	732	18,835	1,948	274	2,502	1,356
1875	1,956	40,990	2,597	660	5,178	3,009
1880	2,516	62,964	2,751	772	6,560	3,072
1885	4,503	122,463	5,587	3,050	14,298	8,616
1890	9,432	321,263	10,069	5,420	26,049	17,585
1895	14,116	484,780	14,573	9,650	26,394	13,846
1900	16,563	530,819	18,296	12,659	41,401	23,732
1901	16,907	537,759	19,698	13,988	43,866	24,128
1902	17,377	560,367	19,815	14,030	43,272	22,975
1903	18,404	572,510	21,025	17,024	53,569	27,766
1904	19,428	588,018	23,312	20,123	62,558	33,216
1905	19,794	626,651	26,636	22,409	71,794	39,396
1906	20,560	671,191	34,193	26,716	82,019	48,748
1907	22,126	772,769	41,784	27,929	87,970	54,215
1908	23,741	846,061	47,150	32,211	101,397	62,036
1909	24,781	898,063	51,060	31,089	104,365	61,989
1910	27,994	1,042,170	59,711	33,606	110,941	65,929
1911	30,059	1,135,715	67,776	34,375	116,782	71,447
1912	31,461	1,201,757	73,641	40,430	132,059	82,641
1913	32,949	1,266,855	82,322	42,033	140,113	87,274
1914	33,507	1,324,090	75,103	33,506	115,107	78,569
1915	33,710	1,336,313	67,401	35,655	124,216	78,522
1916	33,973	1,340,504	64,829	36,630	129,517	84,680
1917	33,993	1,376,688	57,645	31,410	118,502	88,431
1918	33,993	1,380,808	59,040	39,683	169,383	128,345
1919	33,993	1,403,863	70,936	40,235	195,158	144,032

The above figures (except col. 2) are in thousands.

For the year 1920 the net receipts for all railways were $42,128,000 (gold); the dividends about 4.24 per cent.; passengers carried, 82,286,000; goods, 44,323,000 tons.

As regards national finance, for years the position of the Argentine budget has been a difficult one, by reason of the succession of heavy deficits which have almost always been apparent on the completion of their fiscal years. In 1903 this deficit amounted to £603,000, in 1905 to £1,173,000, in 1909 to £10,223,000. For 1920 the authorised expenditure was $463,500,000 (paper); the Revenue, $493,000,000 (paper); the Internal Debt (1919), $660,183,000 (paper); the External Debt, $275,000,000 (gold). The necessity for public works and the exigencies of the expansion of the great national resources of the country give rise to heavy expenditure.

The principal banks are as follows, with the years of their establishment: London and River Plate, 1862; London and Brazilian, 1862; British Bank of South America, 1863; Anglo-South American, 1888; Italia y Rio de la Plata, 1872; Español del Rio de la Plata, 1886; Francès del Rio de la Plata, 1886; Nuevo Italiano, 1887; Popular, 1887; Nacion Argentina, 1891; Aleman Transatlantico, 1893; Popular Italiano, 1899; Rio de la Plata, 1902; Credito Argentino, 1904; Provincia de Buenos Ayres, 1906; Galicia Buenos Ayres, 1905; Torquinst and Co. Ltd., 1874.

The foreign trade of Argentina has increased very greatly. In 1902 the total trade amounted to more than £56,500,000, and in 1911 to nearly £140,500,000. The value of the imports in 1902 were £20,607,000 and of exports £35,987,000. In 1911 these had increased to imports £75,362,000 and exports £64,939,500. In 1920 the exports were $1,007,000,000 (gold) and the imports $854,000,000 (gold). There has always been a surplus of exports over imports except in 1911, when imports exceeded exports by £10,000,000, due largely to the failure of the maize crop in part and the railway strikes. The value of the exports to Britain in 1920 included: wheat, £6,300,000; maize, £11,148,000; chilled and frozen meats, £25,000,000; wool, £775,000.

The population increased from 4,641,000 in 1901 to nearly 8,000,000 in 1920; the growth of the cities being more

rapid than the country. The total debt of the republic, internal, external, and floating, increased from £89,000,000 in the same period to £109,300,000, but decreased per head of the population from £19 3s. 8d. to £17 10s. 1d. The total revenue per head rose from £2 16s. 1d. to £4 6s. 10d.; and revenue derived from taxation from £2 8s. 4d. to £3 18s. 5d.

The agricultural and pastoral production for 1912 reached a value of £196,500,000: forestal £14,000,000, mineral and other £3,000,000; a total of £213,500,000, equivalent to about £3 per head of the population. In 1920 the total value was $5,517,000,000 (paper).

Argentina as a manufacturing country has made considerable progress, due in large part to a high protective tariff which was adopted during the closing years of last century. This, whilst it has served to foster manufacturing industries, had a deleterious effect in other respects, notably in the increase of the cost of living, which rose more rapidly than the rate of wages, with a result that many thousands of immigrants left the country. The effect was markedly shewn in the last decade of the century, when out of nearly a million immigrants for the period considerably more than one-half went away again, partly from that cause. The principal manufacturing centre of the country is Buenos Ayres, where a large amount of capital is invested. The lack of timber, coal, and stone are drawbacks for the country. The forests are far from the coast, but nevertheless are being rapidly devastated. Timber is brought mainly from Norway, and coal from Britain as return cargo for frozen meat.

Among the foreign financial interests in Argentina the British are the most strongly represented. It is estimated that the total amount of British capital in the republic, in one form or another, approaches £330,000,000 sterling; as quoted on the London Stock Exchange; principally invested in national, provincial, and municipal bonds, and in banks, railways and industrial enterprises. The capital invested from the United States represents perhaps one-tenth of this amount. The services rendered to

Argentina by British interests since the establishment of the republic have been the principal factor in the development of the country, and the nation is traditionally grateful to the English people. The commercial and social influence of the British community in Argentina is held to be waning of recent years, a certain apathy becoming observable among them, it has been stated.

When Argentina is surveyed from the standpoint of the wealthy and handsome city of Buenos Ayres, and the great business and industrial undertakings of the republic, its progress and future seem to be assured. Yet it is but a few years since the country was on the point of bankruptcy. Its present prosperity has underlying it elements that appear stable. Long lines of railways have been built ; the docks, of the most modern kind, are crowded with shipping, bearing merchandise of import and export ; ocean steamers from Europe carrying both the immigrant and the investor. Lands unknown and untilled before are planted and harvested, or covered with cattle and sheep. In the older provinces the conditions of aridity have been met by increased water supply, principally by windmill-pumps, and great quantities of agricultural machinery have been imported. The breed of live stock has been greatly improved by the introduction of foreign stock and closer care ; and no expense has been spared in this branch of industry. Great wealth has been obtained by individuals in land speculation ; the successful speculators buying and selling real estate time after time and reaping the increment resulting from their operations. Nor is it to mere speculation that such prosperity is due. The natural richness of the pampa soil and the cheap foreign labour of the Italian immigrants have created wealth for the fortunate Argentino, in spite of droughts, locusts, and the partial re-emigration of the foreign labour. Limitless natural resources, accompanied by inflowing cheap labour, cannot fail to produce wealth, for the employers of the labour at least. The same process is taking place in British America, in the rapid development of Canada, and was witnessed in the United States in recent times. It translates itself into terms of banks, railways, grain-elevators,

stockyards, sumptuous dwellings for the upper classes, electric lights, and ornate public buildings.

The traditional policies of opposition and violence in Argentina which were born of long misrule by dictators and revolutionaries have been giving way during the last generation. Buenos Ayres since 1892 has become completely modernised. The republic emerged from the financial crisis of 1889, due in the main to the enormous natural and easily exploited resources of the soil, and the country's efforts towards progress have secured the sympathy and help of the civilised world. The internal affairs of the republic, concerning the relation of the component states with the central government, whilst they still lack the elements of final stability, embody the broad principle of a well-preserved home-rule system, with a sufficiently safe-guarded centralisation.

From the sociological point of view there are serious drawbacks to the national prosperity of Argentina. The wealth is too much in the hands of a few, and notwithstanding the vast resources and importance of the country, a large bulk of the population is hopelessly poor and backward. Burdens of taxation press heavily on the working classes, and in years of depressions the country loses thousands of its population, who emigrate to escape the high cost of living. These conditions are the result, in large part, of land monopoly, reckless finance, and the abnormally high cost of government. Banking operations of an unsound nature and financial jugglery, together with the unscrupulous use of the country's credit for promoting schemes for the benefit of monopolists or private companies, rather than the public, have often been responsible for these matters; which show how far removed from a just and rational adjustment of affairs even the most advanced of Latin American republics is. Probably the future stability of Argentina will be upon lines of more varied and intensive development of the soil. It was natural that the system of monoculture, or "bonanza" farming, should first have absorbed attention, but the risks attending the system of one crop or product, especially in a region subject to drought,

and depending upon the fluctuations of the market, cannot be permanently productive of good to the community as a whole.* A more equable distribution of the national wealth and possibilities, a better land system, a stricter administration of justice, and a more general growth of education, such as will bring about the upraising of the population, are the necessary elements for the future stability of the enterprising and important republic of Argentina. A new people have arisen in Argentina, who hold great opportunities for the advancement of civilisation in the New World.

* The foreign trade for 1921 shewed a very large falling off from the previous year—imports $635,000,000 (gold), exports $672,000,000 (gold)—due to heavily overstocked markets in foreign goods and diminished demand overseas for national products, and there were many failures. The wheat crop for 1922 was forecasted at 4,500,000 tons, over half of which would be available for export. The wool exports for 1921 were 375,720 bales; of butter 22,000 tons; quebracho extract 124,000 tons; hides 4,400,000 tons.

CHAPTER V

THE REPUBLICS OF THE RIVER PLATE, URUGUAY, AND PARAGUAY

The Oriental Republic of Uruguay, as the country is officially known, from its position on the east bank of the great river—it was formerly part of Argentina—although the smallest independent nation in South America. enjoys peculiarly advantageous geographical and climatic conditions. The commanding sea frontage, and position with respect to the River Plate estuary and the broad Uruguay river, give the country almost the character of a peninsular, and ensure a uniformity of temperature and a climate which is conceded to be one of the healthiest in the world. The important city and seaport of Montevideo is the natural port of call at which all vessels arriving from Europe, or engaged in coasting trade first touch, and had different political conditions prevailed in past years, the growth and prominence of the city might have rendered it superior to Buenos Ayres.

Uruguay differs to some extent in physical character from its neighbour of Argentina, and territorially it is diminutive in comparison therewith, having an area of only 72,200 square miles. This area, however, is equal to that of the United Kingdom. The country is largely composed of undulating, grass-covered land, in the southern half watered by numerous rivers and streams, partly wooded, with hills and outcrops of ore-bearing rocks. The northern section is more rugged, with low mountainous ranges and rocky ridges, enclosing fertile valleys, almost entirely free from forest. The broad flat pampas of Argentina are not encountered. The broad-flowing Uruguay river encircles

the western side of the country, rendering it, in conjunction with the estuary of the River Plate and the sea, accessible on three sides by water. The river is navigable as far as Salta and Paysandu, 200 miles from the mouth.

The population of Uruguay numbers somewhat over a million, composed principally of people of European descent. The Spanish and Italian elements, more or less pure, represents 90 per cent. of the total, 8 per cent. are mestizos, and the remainder Indians, with a proportion of negroes. The increase has been slow, and has owed comparatively little to the immigration of recent years. In certain districts the vegetative increase is exceedingly small, and in others there has been a diminution; conditions brought about both from economical and political causes. Immigration in the year 1907 furnished 26,000 Italians and 22,000 Spanish, and somewhat over 2,000 each of British, French, and German. The average annual birth rate is about thirty-three per 1,000. The death rate is a low one, being less than fifteen per 1,000; that for Montevideo being described as the lowest of any large city in the world. The republic has a markedly high rate of illegitimate births, which is given as 32 to 35 per cent. The marriage of parents automatically legitimatises offspring born before wedlock, in Uruguay law, and illegitimate children are ensured a portion of the parent's estate. The average density of the population is slightly under thirteen per square mile.

The system of government in Uruguay is that of a centralised as opposed to a federal republic. The country is divided into nineteen departments or provinces, and these into districts or municipalities, all under direct control of the central government. Each department has an administrative council, whose members are elected by popular vote. The legislative power of the republic is wielded by an assembly of two chambers—senators and deputies. The senators are named, one for each department, by an electoral college, for a term of six years, one-third of their number retiring every two years. The lower house is elected by proportional representation, at the rate of one deputy for every 3,000

male citizens; those who can read and write. The executive power is wielded by the president, who is elected by the assembly for a period of four years: assisted by a council of ministers, whose departments are: Interior, Finance, Foreign Affairs, War and Marine, Industry and Labour, Instruction, and Public Works. A high court and subordinate courts constitute the judicial power. Each department has an administrative council, whose members are elected by popular vote, and a governor appointed by the executive.

The condition of education in Uruguay is superior to most of the Latin American countries, ranking about equal with Argentina; and slightly less than 50 per cent. of the population are illiterate. In Montevideo there are excellent schools, state supported, and a university, but throughout the republic generally education is much neglected; attendance at schools small, and the instruction of an inferior character. There has, however, been a tendency more recently to improve the standard of instruction. Primary instruction is free and nominally compulsory. As regards religion, the Roman Catholic is that of the state, but other religions are tolerated. The Press of Uruguay is considered to be somewhat dominated by political influence and subject to official repression, and is stated to be less vigorous and intelligent than during its past history. There are, however, a sufficient number of papers, generally well produced and supplied with foreign news, with special journals, as in the case of Buenos Ayres and other capitals, for British, Italian, and Spanish readers. The cost of producing a paper has risen considerably in Montevideo, as elsewhere, of recent times. The language is Spanish.

The nineteen departments of Uruguay, with their areas, are as follows:

Departments.	Areas.
Artigas	4,392
Canelones	1,833
Cerro Largo	5,753
Colonia	2,192
Durazno	5,525
Flores	1,744
Florida	4,763
Maldonado	1,584
Minas	4,844

Departments.	Areas.
Montevideo	256
Paysandu	5,115
Rio Negro	3,269
Rivera	3,790
Rocha	4,280
Salto	4,863
San José	2,687
Soriano	3,560
Tacuarembo	8,074
Treintà-y-tres	3,680

Montevideo is by far the largest city in the republic; its population, including suburbs, is about 400,000; almost one-third of that of the whole republic. The next towns in importance are the River Ports of Paysandu, with 25,000 inhabitants, and Salto with 24,000: Mercedes is fourth with nearly 19,000; there are three towns, Rocha, San José, and Melo, with a population of over 15,000, two of 12,000, and five or six with 10,000 inhabitants.

Montevideo, the capital of Uruguay, is one of the most pleasing cities in South America, largely due to its conditions of climate and general surroundings. The unfailingly clear, blue sky and sunny days, and the presence of the sea and the summer-like temperature contribute in forming an exceptional environment. The temperature seldom falls below 50° in winter, but there are occasional frosty nights, and the maximum summer heat does not exceed 82° in the shade. The city forms a resort of the people of Rio de Janeiro and Buenos Ayres, whose climates are far inferior. The broad bay upon which Montevideo stands commands the entrance to the estuary of the River Plate. The harbour is a handsome one and has been greatly improved: a large expenditure having been made upon new docks, which were built of the excellent native stone quarried near at hand. The works were carried out by the government from the national resources, without the aid of a foreign loan, which was an exceptional circumstance for public works in Latin America.

The population of Montevideo is numbered at 400,000, including the suburbs of the city. Included in the population are more than 40,000 Italians, and almost an equal number of Spaniards, with 5,000 French, 1,000 British,

and about 800 Germans. The architecture of the city presents marked contrasts, due to the mixture of the old colonial type of house, of one story, with modern lofty buildings. The small colonial type of houses, with their *patios* and quaint façades, are, in their way, not inferior to the more pretentious structures of the present time. The topographical situation of the city allows room for expansion, and the conservation of its older character. The women and children of Montevideo, due doubtless in part to their environment, have earned a reputation for their superior appearance: feminine beauty between the ages of fourteen and twenty-five is specially marked, and among all classes a certain standard of good looks and a well-dressed appearance is notable.

Montevideo suffers from the common South American condition of high cost of rent and living. Hotel charges and house rents are high, and articles of clothing and food are double the price of such in Europe. Fresh provision and fruit, which, in a fertile, temperate land, ought to be cheap, are not sufficiently so. The city is well provided with electric tramways, which extend into the well-built suburbs and the picturesque outlying districts. The systems are mainly owned by British and German capital, and the returns, like those from tramways systems in most Latin American capitals, are good, due to the urban travelling habit which is characteristic of the people.

The British element in Montevideo tends to decrease numerically, but it embodies the principal financial and commercial interests, forming the active representatives of an estimated invested British capital in Uruguay of about £46,000,000 sterling, as quoted on the Stock Exchange of London. More than half of this amount is made up by investments in government stocks, whilst the railway system of the country, built in its entirety by British capital, accounts for nearly £13,000,000, with joint-stock enterprises, banking, shipping, influence and commercial interests completing the total. As regards British commerce, it has been stated of late that this does not hold its own proportionally with that of other nations.

The principal industries of Uruguay are pastoral, cattle being bred for meat export, but sheep for wool alone—the meat being neglected. Of the wool about 100,000 bales are exported annually, and the total value of the exports due to the pastoral industries and its by-products has given a yearly average of about £7,000,000 sterling. The curing of beef for the Brazilian and Cuban markets accounts for a large part of the sum. The great meat extract industry of the Liebig factory, where the well-known fluid beef products are made, consumes as many as 3,000 cattle in a single day; and the Liebig factories of Uruguay and Argentina combined consume a yearly average of 250,000 cattle. The scientific and hygienic operations carried on at the Liebig factory, in the production of the meat extract, have been described as high-class, and the industry as one specially adapted to the pastoral resources of the region. It is held that the sunny climate ensures considerable immunity from tuberculosis among cattle in Uruguay.

The jerked beef or "charqui" is a well-known form of food in Latin America. The meat is cut up, dried and salted, and in this condition may be transported for any distance, and resists decay for a considerable time. This food product was used for maintaining the slaves on the South American plantations in earlier years, but now forms a valuable article of diet for the working population generally. There are thirty establishments for producing "charqui" in Uruguay, known as "saladeros"; and a number in Argentina and Brazil; and the meat is exported to Cuba and elsewhere. In the countries of the Andes, quarters of sheep are similarly treated and form a common article of diet for the working classes, and piles of dried meat are observed on the quays, the article being handled like merchandise, without any form of covering.

Agriculture in Uruguay is in only a tolerably satisfactory condition, and from a deficit in bread stuffs at the end of last century the republic now supplies itself with cereals, and exports a good surplus. Other foods are, however, imported. Uruguayan lands are well suited for cattle-rearing, although not for fattening, and notwithstanding

that large tracts of territory waiting development exist, only 8 per cent of the area of the soil of the country is under cultivation. Lands for farming are expensive, and wages have risen very considerably of recent year. The soil of Uruguay is very varied, far more so than that of the immediately adjoining parts of Argentina. In the southern parts most fruits of a temperate climate grow freely, and in the northern parts are found some of sub-tropical character. Scientific methods of cultivation, however, are as yet rarely employed, and it may be said that the agricultural possibilities of the country are hardly known. Until some ten or fifteen years ago, the productive interests of Uruguay were exclusively pastoral, cattle being bred for the meat and hides, and sheep for their wool; trade consisting in these and other animal by-products, which constituted from 90 to 95 per cent. of its total exports. The census or estimate of the live stock of the country, made in 1916, gave 11,500,000 sheep, 7,800,000 cattle, 555,000 horses, and about 400,000 swine, mules, and goats. It is estimated that there are some 14,500,000 hectares of land, equal to about 36,000,000 acres, worth on the average from £6 to £7 the hectare, appropriated to sheep and cattle raising. The value of the exports of pastoral products naturally varies with the seasons. Sheep, as stated, are reared solely for their wool, little or no attention being paid to their meat, but the wool generally is of excellent quality, and is mainly exported to France and Belgium. Even with recent advances, a small part of the soil of Uruguay is under agricultural cultivation, and there are large tracts of excellent arable land still awaiting development. The government is making serious efforts to promote agricultural colonisation; several private schemes to that effect have also been initiated. The two principal difficulties are the want of fiscal or state lands to offer for the purpose, and the lack of organised agricultural immigration—the habits of the people not inclining them to agricultural pursuits—but neither of these difficulties are insuperable. The chief drawback to agriculture is a periodical recurrence of serious droughts, which occur almost regularly every six or eight

years. In a good season Uruguay can produce some of the finest wheat, not merely in South America but in the whole world. During certain years "Montevideo" wheat, as it was called, receives a special quotation, the highest of any in the European market, and it is a noteworthy fact that large quantities of Uruguayan grain are bought by Argentine exporters to mix with and to improve the strain of their own wheat. The amount available for export varies greatly with the season. Maize, or Indian corn, is also grown to a considerable extent; and other agricultural products are linseed, already exported in small quantities; grapes, from which very tolerable wine can be made; vegetables of many descriptions; and fruit, chiefly peaches, strawberries, apricots, melons, lemons, and oranges. The fruit and vegetables go in large quantities to supply the markets of Buenos Ayres. The coasts and rivers of Uruguay are prolific in edible fish, some of fine quality; but no care is taken for their conservation.

Uruguay is a well-watered country, and the river of that name carries a large volume of water calculated at 11,000,000 cubic feet per minute. The Negro, a tributary of the Uruguay, is navigable; and affords a valuable means of communication to the part of the country traversed from the fluvial port of Mercedes. The other rivers are navigable only for steamers of light draught. The possibilities for development of hydraulic energy on the Uruguay and Negro rivers are very important, and recently have been investigated by experts acting on behalf of foreign capitalists. A plan has been proposed also for a hydro-electric station controlled by the government. Development of the water-power will to a certain extent offset the lack of coal and fuel in the country, which is an unfavourable condition as regards manufacturing industries.

The statistics relating to the finance and trade of Uruguay are less easy to obtain than is the case with others of the South American states. The estimated national revenue for 1912-13 was £7,477,000, and expenditure £7,475,000. The exports were valued in 1912 at £9,500,000, and the imports £9,250,000, Great Britain leading in the import trade.

In 1920 the value of the imports (official) was $48,165,000, and exports (real) $80,752,000. The imports are largely of food stuffs, which is surprising in a pastoral and agricultural country. Uruguay, however, is but a small state, sparsely populated. Her alluvial plains and mountains contain, however, great store of unexploited resources, and there is a good network of railways; matters which would seem to assure a prosperous future. The railways in operation in the republic have an aggregate length of 1,535 miles, of which 1,225 are under the control of British capital, amounting to about £13,000,000. The principal British controlled lines are the Central Uruguay and its extensions, the Midland Uruguay, North-west Uruguay, and Uruguay Northern. The gross receipts for the financial year before the War reached £1,250,000, an increase of £131,000 over the previous year, with net receipts of £564,000 approximately, but with the state guarantees the total net revenue of the companies reached £708,000, with a return on the capital of 5½ per cent. These returns now tend rapidly to increase.

The economic development of Uruguay was for years hampered by the character of its administration and by revoluntionary outbreaks. The seizure of farm stock and the impressing of the male population for military purposes tended to impoverish agriculture. Abroad the reckless loan-placing conducted with European financers ruined the credit of the country and plunged it heavily into debt, which resulted in suspended payments and reduction of interest payable to foreign landholders. The administration of justice suffers from the same defects as in the neighbouring republic of Argentina, and calls for radical improvement. The government of Uruguay has long been accused of "socialistic" tendencies, and it has been stated that the relatively backward state of the country is largely due to this. This "socialism" has principally taken the form of restricting the powers of foreign capitalists, and of nationalising public resources and institutions, and possibly may be regarded as an advanced policy which in the future may spread more extensively over Latin America, and which may have in it tendencies of a desire for greater commercial

independence, and so will not be hastily condemned, by the disinterested economist. Whilst blame has been laid to the administration of Uruguay, in common with that of many other Latin American republics, as regards heavy loan-placing abroad, on the other hand it is to be recollected that foreign financiers have had their share of blame, in their willingness to take up such loans, and often to take advantage of the financial straits of backward countries. The administration has also been accused of supporting labour strikes, but replies that it is only concerned in the bettering of the condition of labour. The country at present undoubtedly suffers from too much devotion to single large products, and requires a better distribution of its industries and resources. With the excellent climate it enjoys, the fertile land, all cultivable, the absence of noxious insects and other plagues—apart from the matters of drought and locusts which afflict the country seriously at times—Uruguay must be regarded as a land of considerable possibilities, capable of sustaining a population far in excess of its present meagre one.

PARAGUAY.

The third republic of the Plate, that of Paraguay, is, like Bolivia, which lies upon its northern frontier, an inland country, remote from the coast. These two nations are the only communities among the Latin American republics without direct access to the sea. In Paraguay the deficiency is partly made up by the outlet afforded by the great Paraguay river, traversing the republic from north to south and uniting with the Paraná, which forms part of the eastern boundary of the country, and so flows to the River Plate. Asuncion, the capital, is situated on the left bank of the river, 970 miles above Buenos Ayres, and the regular lines of river steamers drawing ten feet of water form a direct means of communication with the Atlantic ocean. The approach to Asuncion is picturesque. After five days of steamer journeying on the full-flowing river a region of gorgeous forests is entered, where king-

fishers, alligators and the *Victoria regia* lily are seen; a fine avenue of approach. Topographically, Paraguay forms part of the great depression known as the basin of Paraná, whose western edge is formed by the Andes, and on the east is bounded by the Brazilian highlands. To the north rises the sheer edge of the Matto Grosso tablelands of Brazil, and to the south-west is the Great Chaco, part of whose vast and partly unexplored territory forms the western portion of Paraguay. This part of the Chaco consists largely in swamps, forests, and jungles, inhabited by uncivilised Indian tribes; among whom, however, the South American Missionary Society is doing good work. Paraguay is bisected by the tropic of Capricorn. The year is divided into two seasons, summer and winter, from October to March and April to September respectively, with a mean temperature for the first of 81° and for the latter 71°, and an annual rainfall, fairly distributed throughout the two seasons, of about forty-six inches. The area of the country is about 97,700 square miles. The eastern portion is the most thickly populated and important.

The Paraguayans have as the principal basis of their population the Guarani Indian people, and the admixture of foreign blood is less than in any of the other South American republics. The white element, as always, forms the governing class, and the official language is Spanish, although the common speech is Guarani. The total population, including the uncivilised tribes of Indians, is considerably under a million. Immigration is on a small scale, although it will doubtless increase as the advantages of the country become better known. The total foreign population is less than 20,000, half of which are Argentinos, but the government is seeking to attract a portion of the immigrant Italians of Argentina and Brazil. The Paraguayans are a far less energetic people than their neighbours of Argentina, and modern civilisation progresses but slowly at present. The natives generally are poor and ill-fed, the common condition of most of the Latin American republics, and are easily attacked by disease. The conditions of climate require only clothing of a primitive nature, and

boots are only worn by the upper class, as in Mexico and the Andine countries.

The government of Paraguay is divided into the usual legislative, executive and judicial branches. The legislative power is vested in the congress, comprising the senate and chamber of deputies, whose members are elected by universal male suffrage on a proportional basis, of one senator for each 12,000 inhabitants and one deputy for each 6,000. The president is the head of the executive, and is chosen by an electoral college for four years, and is advised by a cabinet of five ministers, who are responsible to congress. The supreme court is the high judicial authority; and the civil and criminal codes are practically those of Argentina. The republic is divided into twenty-three countries or "partidos," which are subdivided into communes.

Education in Paraguay, as is natural from the political history of the country, is backward; by law it is free and compulsory, but the attendance of children at the schools in some districts is almost impossible under present conditions. As regards religion, the established church is the Roman Catholic, but liberty for other creeds is guaranteed by the constitution.

The principal article of cultivation in Paraguay is a product peculiar to the country, the yerba maté, or Paraguayan tea, whose growing and collecting forms the main industry at the present time. The tea is well known throughout southern America, especially in Argentina and Chile and in parts of Brazil, where it takes the place of ordinary tea and coffee. Like those beverages, its effects are stimulating. The leaves of the shrub, the *Ilex Paraguayensis*, are stripped, dried in the sun, packed in sacks, and exported; four to five thousand tons annually representing the export. The cost of production is small, and despite import dues in Argentina the article is sold at less than the price of tea and coffee. Maté has no injurious influence on the digestive organs, and its action is stomachic and laxative. During the war with Paraguay, the Brazilian soldiers marched and fought day after day without any

other sustenance. There appears to be nothing prejudicial about it, and scientists have praised it unanimously, yet while this tea could be placed on the market in England for 6d. a pound, it is there almost unknown, being found only in herbalists or chemists' shops, where it is sold at the price of 3s. per pound.

A considerable portion of Paraguay is extremely fertile, rich soil affording facilities for meadows and pastures which are capable of a varying agriculture, such as might render the country the orchard and garden of that part of the South American continent. Sugar cane, grapes, tobacco, cotton, coffee, oranges, rami fibre are among the products which are, or should become, increasingly important. Paraguay is an ideal country for stock-raising, and the cattle industry, which comes next in importance to the native tea, is growing ; but both climate and pasture are unfavourable for sheep farming. The cattle are small, but Herefords and Durhams brought in from Argentina are improving the breeds, and the production of cured beef and meat extracts may develop into important industries. The estimated number of cattle in the country in 1908 was 5,500,000. Hogs are fattened on oranges at times ; the orange groves yielding abundantly, although they are in large part uncultivated. In the last-mentioned year nearly 11,000,000 dozen oranges were exported, principally to the large towns of the River Plate. The forests of Paraguay yield special kinds of timber in abundance, such as the *quebracho*, used for tanning, and of extreme durability for building purposes. The principal food of the masses in Paraguay is maize and mandioca. The seeds of the *Victoria regia*, whose splendid flowers abound on some of the Paraguayan lakes and rivers, also form an article of diet.

There are no state or public cattle lands available in Paraguay, as these are in the hands of private owners, a condition thereby differing from that in Argentina. The value of cattle land is rising, and now fetches from £1,200 to £3,000 per square league ; equal to an area of 4,635 acres. Natural pasturage is abundant, the climate is ideal, and shelter for the stock unnecessary, but drought prevails during some

years, and is damaging, as in Argentina, Brazil, and Mexico. The main source of cattle supply is the Brazilian state of Matto Grosso to the north, where grown cattle may be purchased at 35s. to 48s. per head by the herd, and when fattened for a year and a half on good pasturage sell to local butchers or to the "saladeros" at from £2 10s. to £3 10s. Only the lowest grade of stock, however, exists in this part of South America at present, suitable for meat extract or canning, and not for refrigeration, and so far the breed has not been improved with imported stock. There are a few "saladeros" in the country, which at present afford the only market; and the canning and meat-extract factory has its own herds.

The republic has few railways so far, the principal line being the Paraguay Central, from Asuncion through Villa Rica to the Paraná river. This is to be crossed by a train-ferry at Encarnacion, so connecting the line with the railways of Argentina, and shortening the distance and time of travel from Buenos Ayres to Asuncion from five days to thirty-six hours. The line is well equipped, and has opened up great areas of valuable territory.

Paraguay has been the subject of exaggerated descriptions; a common condition of most Latin American countries. On the one hand it has been condemned as a pest-ridden and poverty-stricken land of unbearable tropic climate, and on the other lauded as full of great possibilities and pleasing features. In reality it is a country of contrasts, like its neighbours, affording compensating circumstances and varied conditions both of nature and people. Asuncion, the capital, is picturesque and has certain advantageous features; whilst much of the country merits the description of a natural garden, where flowers and fruit run riot, even around the thatched, mud-walled huts of the squatters, in certain districts.

Asuncion is built upon a sandy plain at 250 feet elevation above sea level, partly upon hillsides of pleasing appearance overlooking the river and the forest country of the Chaco beyond. The climate of the city is healthy, if hot, with a mean annual temperature of 72°. Its streets are laid

out on a regular plan, with some buildings of considerable merit, with a large number of religious edifices. These latter are reminiscent of the exceedingly bitter religious history of the country, the struggles between the Jesuits and the Church. Traffic is carried on between the capital and outlying towns in most cases by diligences, some of the roads being tolerably well maintained by the government.

Paraguay has suffered terribly, during the whole of its independent history, from wars and revolutions. Half a million of its people were killed in the war with Argentina and Brazil in 1864. In the year 1912 the revolutions in progress were practically destroying the male population, and misery and desolation covered the land. Peace is only secured by the advent or triumph of stronger political adventurers, and the duration of governments is short.

The prevalence of leprosy in Paraguay has aroused some discussion of late, and although it may have been exaggerated, the disease is more widespread than is generally recognised abroad. The danger from contamination is not serious to the traveller in general, although possibly more so, it is stated, than in Argentina, Brazil, Colombia and other South American countries, where it is also encountered. The insanitary mode of life of the poorer classes and the lassitude of the authorities are responsible for the propagation of the scourge, which might assume greater proportions.

Paraguay was the scene of an interesting experiment in communism known as the "New Australia." This colony was established twenty years ago by one William Lane, who with a little band of Australians left Sydney to demonstrate their economic theories upon a grant of land allotted them by the government of Paraguay. In this colony there were to be no rich or poor, no master or servant, but each was to work for the community, and every member of the band, before starting, made over to the common fund all his worldly possessions. The colony underwent endless misfortunes but was very generously treated by the government of Paraguay, as both the colonists and the government sincerely believed the result would have been a success. The land was extremely fertile, but remote. Discontent

and disillusionment soon arose, and although the leader and some of his followers struggled bravely on, the principle which they had set out to demonstrate was proved impracticable, and disaster resulted. Had the colony abandoned the impossible methods of communism and set to work on a more practicable basis, valuable results might have been attained, and although the remnant of the colony still exists it is now working on purely individualistic lines. There were interesting communistic systems in vogue among the Paraguay Indians in early times, some of which exist to-day.

The financial history of Paraguay has been a difficult one. In 1898 the government were unable to meet their obligations with the foreign bondholders, and at the close of 1908 the total indebtedness of the republic amounted to some £7,500,000. The service of this has, however, continued for some years, and the movement among foreign capitalists for the development of railways, which has recently taken place, may assist the progress of the country, whose greatest hope is in the extension of agriculture. The total amount of British capital invested in Paraguay reaches the sum of £3,000,000. The national revenue for 1911 was about £679,000 and the expenditure £667,000. The value of the exports for 1919 was $14,816,000 (Argentine gold pesos), and of the imports $15,836,000.

Given a period of political stability, the gradual development of Paraguay may be brought about, consolidating the portion of the vast, rich heart of South America. The experiments in so-called Socialistic governmental measures may be observed with a certain amount of interest by foreign and South American peoples. A proposal was recently brought forward by the President to govern the country by a "council of nine," instead of the usual presidential executive, with a view of eliminating the abuses so frequently resulting upon this. Whether other abuses might result has been open to question. It is in the reasonable development of the country's resources, in the interests of its people, that true progress will be secured.

CHAPTER VI

THE REPUBLICS OF THE ANDES—PERU

The countries of the Pacific side of South America are marked out for distinction by the mighty Andes, one of the greatest topographical features of the earth's surface. The great Cordillera, which parallels the coast of South America for its entire length of 4,000 miles, is the main source of wealth and utility of the dominion which it overlooks; which it fertilises from its snows and enriches with its minerals. The Andes of Ecuador, Peru, Bolivia and Chile appeal to the imagination of the traveller and stimulate the mind of the inhabitant. They are at the same time a mighty engine, carrying out the atmospheric and hydraulic functions of nature of a whole continent, a storehouse of resources, a thing of beauty and mystery. The "treasures of the snow" are translated into terms of corn, wine and oil, of meats, drink, and clothing, upon the great lands upon its base on both sides; which are enjoyed by the dwellers in countries far afield, even across the seas. No other mountain range of the world equals the Andes in magnitude, nor is likely to be of greater service to mankind, as it is learned more fully to develop the resources of the earth. The Andes are replete with strange and curious things, phenomena, effects, and conditions, many of which are still unstudied.

Peru, above all the lands of South America, stands out for its romantic history and strongly marked topography. Its past has been mightier than its present; the glamour of the Conquistadores still enshrouds it; the fallen temples of the old Incas, the mystery of its great mountains, deserts, and valleys, its unknown rivers and unexplored forests, its fabulous wealth of mines, and the vast expanses of

uninhabited territory are fraught with possibilities for the adventurous, and never fail to appeal, even to those to whom this strange land is little more than a name.

The western side of the South American continent thus presents, topographically, a marked contrast with the eastern side; and the four republics occupying the region: of Peru, Chile, Ecuador, and Bolivia, fall into a natural group, having much in common as regards their physical conditions. These conditions have induced a certain similarity in the composition and social regimen of the people, except that Chile varies in its national characteristics from the other republics who share the Pacific slope and Andean highlands.

The predominating natural feature of the region—the Andes—has determined in the main the formation and climatic conditions of the littoral, and has created the long, dry, narrow zone of the Pacific slope, which parallels the mountain chain, extending throughout the whole seaboard of Peru and a great part of Chile; forming a coast arid, rainless, treeless, and almost without vegetation, except that grown under artificial irrigation. Beheld from the sea, the Pacific littoral unfolds to the view as a series of deserts, some of the most sterile upon the earth's surface; intersected at wide intervals by valleys and rivers which descend from the Cordillera, from eighty to a hundred miles distant. The valleys are irrigated and cultivated from these torrential rivers, and in these oases are situated the principal towns of the coast, adjacent generally to the seaports.

The phenomenon of the absence of rain upon this coast zone, more than 2,000 miles long, and the consequent lack of vegetation, is due to the interception and "blanketing" of the trade winds from the east by the Andes, the moisture held in suspension being deposited on the summit of the Cordillera, in the form of snow and rain, and failing to reach the coast. A further circumstance influencing the climate of the littoral is the Humboldt or Peruvian current, a great body of water cooler than the surrounding sea, which sweeps up the coast from the south; its lower temperature pre-

venting the evaporation of the sea water. A certain amount of moisture is, however, afforded to the coast lands by the heavy mist which at certain seasons lies upon the coast, and which gives rise to a slight drizzle, known as *garua*. This mist-drizzle is sufficient to wet the pavements and chill the atmosphere in Lima and the coast towns, and to stimulate the growth of the vegetation on the foothills at certain seasons, bringing forth a crop of herbage and wild flowers, upon which cattle feed. The lack of rainfall, which renders the coast of Peru arid, carries with it certain compensating circumstances, of comparative freedom from fevers and other tropical disorders, which afflict the seaports of Peru to a far less extent than is the case with Ecuador, to the north. Light malaria, or *paludismo*, is common, but yellow fevers and plague rare. The coast of Ecuador lies beyond the influence of these climatic agencies of Peru, and is covered with dense, tropical vegetation; and Guayaquil, the principal seaport of the republic, suffers seriously from yellow fever and the other scourges which attack tropical seaports, and will continue so to do until sanitary science is brought to bear upon them. The temperate condition of climate, and the comparative immunity from diseases of this character in Peru and Chile, are noteworthy when comparison is made with places in the same latitude on the Atlantic side of the continent. Thus, Lima, the capital of Peru, with an average temperature of 66° F., lies almost upon the same parallel as Bahia, the hot, unhealthy seaport of Brazil, with an average of 77°; and Iquique is near the latitude of Rio de Janeiro, which formerly was a hotbed of yellow fever.

The long bare coast of Peru stretches for vast distances between the few havens of the seaports, surf-beaten under a blue sky; the sand dunes, escarpments, and barren slopes extending away far inland. Here and there the promontories and islands appear as covered with snow, the accumulation of guano from the palmipeds, the alcatraz, the gaviota, and other guano-producing birds who at times are seen in myriads flying low like a darkening cloud upon the face of the water, and which are the source of considerable

wealth to the country. Millions of cormorants inhabit these silent stretches of coast, their presence undisputed by the few, scattered habitations. In the rocky bays and islets, sharks and *bonitos* in large numbers exist, and the bleating of the seals, or "lobos del mar," is heard; and quantities of these are seen in their peculiar haunts. The Indian fisher with his net is the only human figure to be encountered for vast distances, as the traveller pursues his way on horseback along the edge of the Peruvian shore.

The coast of Peru holds surprises in this barrenness for the traveller who has pictured a region of tropical vegetation. There is not a tree except in the oases formed by the river valleys which intersect the deserts, where the green foliage of the algarrobo trees and willows, and in some regions the olives, with the alfalfa plantations, fruit gardens, fields of maize, cotton, and broad stretches of sugar cane, extending to the foothills, prove the fertility of the coast lands under irrigation. The deserts are often peculiar in character, and in some places the singular phenomenon of the *medanos* is encountered, as between Arequipa and the coast. These *medanos* are isolated dunes or hillocks of sand, of a uniform crescent shape, varying from a few to twenty feet in height, having the convex face towards the prevailing wind and an inner vertical side. The dunes are set in slow motion when the wind blows, by the change of position of the sand particles, the symmetrical form being preserved on their slow "march" across the desert; and at certain states of the atmosphere they give forth a peculiar musical noise, not unlike a distant drum, caused by the eddying motion of the sand particles. In some instances in the foothills there is a certain amount of wild vegetation, as mentioned, fertilised by the mists, and a growth of flowers during the misty season; but elsewhere there are areas of barren sand. In the south of Peru the ravages of tidal waves following on earthquakes are visible, and old sugar-cane plantations which were inundated and destroyed.

These vast expanses of open coast are attractive in their solitude, and possess their own unique beauty, lying under a generally cloudless sky, and washed by the blue waves of

the Pacific, whose long rollers, uninterrupted for thousands of miles, throw up flotsam and jetsam proceeding perhaps from the coasts of Asia and Australia. Upon this coast may have stranded prehistoric junks from China, and indeed there are traditions of such happenings. From the sea the Inca *chasquis*, the swift runners of the early Peruvian Emperor, bore up baskets of fish so swiftly that it was carried *fresh* into Cuzco for the royal table. Cuzco lies far beyond the mountains, the maritime Cordillera, whose serrated edge appears far off, flat against the horizon, the valleys and canyons unmarked in the distance. But with the exception of the mountain of Ancachs, in the north, known as the Huascaran, whose high, snowy summit is seen occasionally from the steamer's deck, the snow-capped peaks of the Cordillera are not visible from the coast, as is the case in Chile. The name Ancachs, in the Quechua language of the Peruvian Indian, means "blue," and is applied to one of the great provinces of the north.

If the junks of prehistoric Asiatics did reach the Peruvian coast, and gave rise to tribes of more or less civilised coast peoples, it must have been in the very remote past. The ancient ruins of the Chimus and others, the considerable burying places and mummy cellars of the old coast peoples, reveal pottery of the most exquisite workmanship: handiwork such as long periods must have been required to evolve. Along the northern coast from Tumbez it was that Pizarro and his band struggled so painfully, with repeated disappointments and famine. It was at that place that the giant Pedro de Candia leapt ashore alone from a caravel, in view of an Inca town, with a great wooden cross in one hand and a sword in the other, exclaiming that he would explore yonder valley and town or die. And from that inhospitable coast Pizarro and his men ascended the toilsome Cordillera, up rock-hewn steps and impossible trails which had never before known the tramp of a horse's hoof; away to Cajamarca, lying, like Cuzco, far beyond the blue serrated edge of the great mountains which arose on the eastern horizon—a mysterious curtain stretched between the sea and the stronghold of an unknown potentate, to

whom battle must be given, according to the law and devoir of that ocean chivalry. The associations of this old land for the traveller hold much that is romantic and unique.

If, therefore, from the steamer's deck the coast of Peru seems to present an arid and uninviting appearance, the impression is lost upon entering the country. The topography of the hinterland is peculiar, and the littoral is in reality the seat of some of the largest towns, where the Europeanised civilisation has taken root, and of considerable agricultural wealth and prosperity. The very extensive regions of the Pacific littoral and Andean highlands contain matters of interest and profit equal, in their particular sphere, to that of the Atlantic side of the continent. The mineral wealth is a permanent lure to foreign capital, and the archæological field attracts an increasing number of students. The stupendous mountain ranges and unclimbed snowy peaks of Peru and Bolivia are a source of interest for the adventurous traveller, as are the great unexplored and unsettled regions lying upon the eastern slopes of the mountains, beyond the summits of the Cordillera, where stretches the lake basin of Titicaca, and the great territory drained by the headwaters of the many streams which form the affluents of the Amazon.

The great mountain system of the Andes in Peru, running south-east, consists broadly in three main chains or Cordilleras. The two western chains, parallel and relatively near each other, are of similar geological origin, and the great eastern chain, which rises from the basin of the Amazon, is distinct therefrom. The three chains are known respectively as the western or Maritime Cordillera, the Central Cordillera, and the Cordillera Real, or main Andes. On the western chains are many volcanoes and thermal springs, and the valley between, and the cold, lofty *punas* or plateaux contain the Alpine lakes which are the sources of the coast rivers; and the inland drainage basin of Titicaca. The Maritime Cordillera contains a number of high, snowy peaks, in Peru and Tarapaca, of striking and even sublime aspect, like the colossal uplifts of Ecuador. There is a chain of volcanic

peaks overlooking Tarapaca, and further north the Misti volcano which overhangs Arequipa ; but the volcanoes are generally quiescent. The Cordillera Nevada of Ancachs contain a series of splendid snowy peaks, and during the rainy season, from October to May, their magnificence is well displayed, for the sky is clear at dawn. Of Peruvian peaks Lirima rises 19,128 feet above sea level ; Tocora 19,741 feet, the Misti 20,013 feet, Sara Sara 19,500 feet ; Huascaran 22,051 feet, and Huandoy 21,088 feet. The Central Cordillera forms the water-parting of the Andean system, with more than twenty coast streams rising therein, and only one—the Marañon—breaks through it, flowing to the Amazon. The coast streams have broken their way coastward through the Maritime Cordillera. The geological formation of the Central chain is mainly that of crystalline and volcanic rocks, on each side of which sedimentary and metamorphic rocks stand up in vast serrated strata, partly of jurassic age. Enormous fossils, great ammonites, are encountered in the limestone strata at elevations of more than 14,000 feet. The Eastern Cordillera in the southern part of Peru, and on the borders of Bolivia, of silurian formation, is of magnificent aspect. Llampu, or Sorata, reaches 21,709 feet, and Illimani 21,014 feet. These great uplifts are fossiliferous to their summits. Talcose and clay slates constitute a large part of the formation of the range, with eruptions of granitic rocks and numerous quartz veins, and the whole chain is richly gold-bearing. It differs from the Maritime Cordillera in the lack of volcanoes. The enormous river system of Peru has its birth in these ranges, the eastern range being cut through by six great rivers : the Marañon, the Huallaga, the Perene, the Mantaro, the Apurimac, the Vilcamayo, and the Paucartambo ; the last five of which are tributaries on the broad Ucayali, one of the main affluents of the Amazon in Peru. These rivers break through the chain in deep canyons, or *pongos*, of remarkable form, all flowing north-westwardly in the deep valleys paralleling the Cordillera, to where they turn to the east to form the Amazon. There is perhaps no hydrographic system in any continent so remarkable as that of the Andes and the Amazon in Peru.

The area of Peru is variously estimated between 440,000 and 480,000 square miles, or including Tacna and Arica, and certain disputed territories in the Amazon valley, 677,000 square miles. The three great zones into which the surface of Peru is thus naturally divided are known as the *Costa*, or coast, the *Sierra*, or mountain region, and the *Montana*, or forest region. The first is 1,400 miles in length, by eighty to one hundred wide, and the second somewhat longer, with a width of about 250 to 300 miles. The third region has an irregularly shaped boundary line with Brazil, Bolivia, Ecuador, and Colombia, parts of which are in dispute; and it embodies two-thirds of the whole area of the republic. The three regions offer very diverse conditions of climate and products; and the classes of inhabitants which occupy them vary equally. The topography of Peru is one of the most remarkable of any country in the world; and each of the three regions forms in effect a world of its own, and the inhabitants of one adapt themselves with difficulty to the climatic condition of the other. They are remote from each other, and, as regards the hinterland, of difficult access. The great areas of territory lying upon and to the east of the Andes, broken and diversified, with a temperature and flora varying from the Arctic to the tropical, are veritable storehouses of natural wealth, a region of incalculable value for the future, which will be enjoyed by a generation that shall have learned to approach it with efficient means of transport. At present the Latin American civilisation and government of the republics which control them is but feebly exercised therein. The uplands are inhabited by the Christianised Cholos and Indians, and a meagre ruling class of mestizos, inhabiting towns of Spanish American character, whose amenities decrease in proportion with their distance from the coast. The forests are the abode of uncivilised Indians, who come within the regimen which obtains in the Amazon valley, and have been more fully dealt with in the chapter devoted thereto.

The inhabitants of Peru, like those of Ecuador, Bolivia, and their neighbours, are composed of the three classes;

the whites, the mestizos, and the Indians. The white people, although the ruling class, are comparatively few in number, generally calculated at 10 to 15 per cent. of the population, but are less if a sharp dividing line be drawn. More than half the population of Peru are pure Indians ; and the Indian element even more largely predominates in Bolivia and Ecuador. The mestizos in Peru number 35 per cent. of the total, and a greater proportion in the other two countries. They form the active working element of the Andean republics and constitute the basis of the Spanish American race, and must in time absorb both the whites and Indians. The white Peruvians are the more intellectual class and form the professional and governing element. The total population of Peru is given at the last census as 4,600,000; that of Bolivia and Ecuador very much less. The Indians of Peru and the adjoining Andean republics are, as already indicated, of two distinct kinds: the Cholos of the uplands, who are the descendants of the Quechuas and Aymaras, the original population of the Inca empire, and the forest Indians, known as *Chunchos*, *barbaros* or *salvajes*; a term varied by that of *infieles* in Ecuador and Colombia. Probably, however, there is no fundamental difference of race between the highland and forest Indians. The Cholos are little mixed with Spanish blood, but merge into the mestizo class in the highlands. They are Hispanicised and Christianised, generally understanding the Spanish language and worshipping in the Roman Catholic faith: a hardy, valuable race, and the future of the great territories of the Andean uplands, as regards labour, depends upon them. These people have, in Peru, Bolivia, and elsewhere, suffered severely, and still suffer, at the hands of the white man; the conditions of their life in general are unworthy of the administration of Europeanised republics; and since the overthrow of their native rulers at the time of the Spanish Conquest they have greatly deteriorated.

The negro and Asiatic elements in Peru are small, and are estimated at about 4 per cent. each of the total population. The negroes rarely leave the warm coast regions, but the Asiatics, represented principally by the few Chinamen,

settle in the upland towns and engage in trade, generally that of petty shopkeeping, in which their usurious talents bring them success. The Japanese are being officially encouraged to settle in the Montaña region as agriculturists, as they show a certain adaptability; and they have also been imported for employment on the sugar plantations of the coast, where they are preferred to the native labour, both by reason of their steadier or more servile habits, and as earning lesser pay. The negroes were early introduced as slaves on the sugar plantations, and all the heavier manual labour was done by the Africans until 1855, when slavery was abolished. Like the Brazilian slaves in later times, on obtaining their freedom they deserted the plantations for the towns. The beginning of the suppression of slavery took place in 1849, and the sugar estates thereupon imported Chinese coolies to supply the failing source of black labour, but these Chinese immigrants were treated with great cruelty; and due only to resulting scandals was their hard lot bettered. Slave raids were also made by the Peruvians upon the distant Pacific Islands, many of which lost large portions of their population, the natives being carried away to furnish labour for the working of the guano deposits. The admixture of the negro and the Indian has resulted in a type known as Zambos; and the progeny of the Asiatic and the Indian is also distinct. The Chinaman is soon at home among the Cholos of the interior, and there is no repugnance on the part of the women to mating with him. The ready assimilation of the Chinaman and Japanese with his surroundings in Peru, as in Mexico, might seem to support the theory of some prehistoric peopling of Latin America from Asia, or affinity therewith. The negro, on the other hand, is regarded with less favour, and is not an element which is ever likely to be absorbed.

The upper classes of the people of the Andean countries, the white and the educated mestizo, present very similar characteristics in Ecuador, Peru, Bolivia, and Chile; and Colombia and Venezuela might equally be included. Their language, appearance, social system, laws, and literature are

practically the same throughout the whole of these great territories ; and the circumstance is a witness to the vitality and impress of the Spanish race and its institutions. There are local variations in this class, but they partake more or less of the same virtues and defects. The Chileans differ most from the general character on the Pacific coast—due to the difference between the Quechua and Aymara natives of Peru and the Araucanans of Chile, who form the basis of the native populace ; also to a certain European admixture, as discussed elsewhere.

Peru is divided into eighteen " departments," two littoral provinces, and the " constitutional province " of Callao. This does not include Tacna, the debated territory, and its three provinces. The departments are subdivided into an aggregate of ninety-eight provinces, whose area, position, and approximate population are as follows, beginning at the north :—

Departments	Area Sq. miles	Population	Capital Town.
Coast Departments			
Piura	16,825	205,000	Piura
Lambayeque	4,614	112,000	Chiclayo.
Libertad	10,206	250,000	Trujillo.
Ancachs	16,562	405,000	Huaraz
Lima	13,310	280,000	Lima.
Ica	8,718	80,000	Ica.
Arequipa	21,947	218,000	Arequipa.
Sierra or Mountain Departments			
Cajamarca	12,540	411,000	Cajamarca.
Huanuco	14,024	114,000	Huanuco.
Junin	23,350	390,000	Cerro de Pasco
Huancavelica	9,250	222,000	Huancavelica.
Ayacucho	18,185	250,000	Ayacucho.
Apurimac	8,187	170,000	Abancay.
Cuzco	156,270	420,000	Cuzco.
Puno	41,200	500,000	Puno.
Montaña of Forest Departments			
Amazonas	13,940	66,000	Chachapoyas.
Loreto	238,500	151,000	Iquitos.
San Martin	30,745	42,000	Moyobamba.
Littoral Provinces			
Tumbez	1,990	10,000	Tumbez.
Callao	14½	46,000	Callao.
Moquegua	5,550	41,000	Moquegua.

These populations are estimates, and must be regarded as approximate.

The government of Peru is a centralised, as opposed to a federal system. Its constitution provides for the popular control of legislation and the carrying out of the laws by means of the free exercise of the ballot. Theoretically the people are possessed of sovereign rights in the election and choice of their representatives; but these excellent ideals are, unfortunately, frequently defeated by reason of the dictatorial attitude of the governing classes and the ignorance and poverty of the masses, and their dependence upon the great landed proprietors and industrial corporations. The destinies of the country, therefore, remain, generally speaking, at the disposal of a politically arbitrary class. Citizenship is accorded to all Peruvians over twenty-one, and all married men under that age, and the suffrage is extended to all citizens who can read and write or who pay taxes. The government is divided into the three divisions customary among the Latin American republics, of Legislative, Executive and Judicial, of which the executive is the dominant power. A president and two vice-presidents, elected for a term of five years, and a cabinet of six ministers constitute the executive branch. In the departments the law is carried out and government controlled by prefects, and in the provinces by sub-prefects, all of whom are appointed by the President. The Legislative power is in the hands of Congress, formed of a chamber of deputies and a senate, elected by direct vote, the senators by departments and the deputies in proportion to the population. There are an equal numbers of substitutes or "suplentes," who take office in case of vacancy, and all must be native-born citizens. The senators must have a yearly income of 1,000 dollars, and the deputies 500 dollars. The Judiciary consists in a supreme court, superior courts, courts of first instance, and justices of the peace. The supreme court is situated at the national capital, Lima, and the judges are selected by Congress. Questions of jurisdiction between the superior and supreme courts, or between the supreme court and the executive are settled by the senate sitting as a court. Courts of first instance are established in the provinces.

The safeguards against electoral, official, and judicial abuses in Peru are theoretically impregnable, but in practice few countries have suffered more from political disorders, often brought about by their contravention. The independence of the courts has not always been maintained, and the republic has had to undergo much criticism for these reasons. It is to be recollected, however, that many of the departments and towns are extremely remote from the seat of government, and that corruption and malpractices spring spontaneously in the Peruvian character away from the influence of public opinion and the direct powers of the executive. Hundreds of miles of mountain, desert, and forest separate the outlying centres of population from the capital, and to judge between truth and falsehood as concerns reports, and to distinguish between punishment and oppression, is not always easy for a remote government, situated on the Pacific coast, without means of communication in most cases with the hinterland except by the execrable mule trails. Justice becomes largely a matter of position and influence, and must be looked upon as in a mediæval stage in the remoter districts.

The provinces are further subdivided into districts, over which *gobernadores* and *Alcaldes* are appointed by the prefects. There are many hundreds of these petty officials throughout Peru, who are naturally unsalaried. They are generally drawn from some prominent shopkeeper or townsman of the villages, and their control of the Cholo and Indian population is an autocratic one. They not unfrequently acquire local wealth at the expense of these classes, who have to suffer without redress or only that afforded by the influence of the parish priest, whose authority itself is often spoliation under the cloak of religion. In the Montaña region, the uncivilised Indians have no civil rights, and are hunted and enslaved even by the petty authorities. On the whole, however, the gobernadores and their kind are not ill-disposed towards the poorer classes, and there are evidences that, under growing enlightenment, they would avail themselves of better methods. Both the gobernador and the *cura* are intelligent and hospitable as a rule towards

the traveller, and upon their good offices he is thrown, as there are in the remote districts no public facilities of any kind. The principal cause of complaint of the Cholos and Indians is in the forced labour without pay, or with insufficient pay. The Indians and Cholos, however, are themselves often lazy and deceitful. They have long been abused by their white conquerors ; and the mestizo race, from which the gobernadores are drawn, are even harder upon them than the white man. The dominant note of the lower classes in the remote region is that of distrust, especially towards the military element, who have despoiled them in every revolution and even in times of peace by commandeering their food and animals, and making free with their women.

The republic is divided into four military districts, at Piura, Lima, Arequipa, and Iquitos respectively. Formerly the Indians were pressed into the service, with the whites as officers, but service is now obligatory for all Peruvians between the ages of nineteen and fifty, in one or other of the various classes. A part of the troops are drawn from convicts and other outpourings of the prisons. The reorganisation of the army was brought about by a French " military mission." The Peruvian soldier is generally hardy, patient, and brave.

The navy has grown little since its practical annihilation in the Chilean war, but two new cruisers have been acquired on the Pacific coast, and on the Amazon, or Marañon, and affluents are a few river boats engaged in the police and survey work. Peru has fine national traditions concerning both her army and navy, which are worthy sources of inspiration to her poets and to the present generation : and a strong sense of patriotism animates all classes of those who hold civic rights and have the sensibilities wrought of the admixture of white blood. Even the abused Indians of Peru have fought staunchly in the republic's wars, and the brave upland natives perished in thousands on the coast during the Chilean war, both in battle and from the change of climate and general privations. Among those names which always stir the Peruvians to emotion are Grau, and his famous battleship the *Huascar*, and Bolognesi and his

fateful defence of the Morro of Arica—national heroes whose names are wrapped in romance, remembered with gratitude and spoken with reverence.*

Along the coast of Peru lies the more modern and energetic life of the country. There are some good harbours, but with the exception of Callao, Chimbote, and Payta, the Peruvian seaports are generally small, open roadsteads, where landing is difficult. The coast towns generally lie inland some distance from the ports, connected by short lines of railway, and the ports are often little more than poor collections of habitations around the landing stage and customs house, of a straggling and unkempt appearance. Chimbote, in the north, has a fine sheltered bay of large size, but it is a minor port, with little traffic. In the country behind lies the valley of Huaylas, of considerable agricultural and mineral resource, threaded by the torrential Santa river. Extensive coal deposits exist in this valley, which is one of the most populated in the country; and a railway has long been under construction to Huaraz, an important town near the head of the valley. North of Chimbote is Payta, the centre of the important cotton producing district of Piura, one of the principal agricultural regions of Peru. Payta is important in addition as being the terminus of a projected line across the littoral and the Andes down to the headwaters of the Marañon, or Amazon, where steam navigation begins for the Amazon valley. Such a line would be of much commercial and strategic importance to Peru. In the extreme north is the desert of Sechura, which yields sulphur commercially; but none of the barren coast districts yield nitrate, such as forms the mineral wealth of northern Chile. The coast of Peru is more broken in the north, with broad desert plains, which form the westernmost part of the South American continent. The desert region of Piura stretches for 200 miles northwards to the gulf of Guayaquil, and is traversed by the Tumbez, Chira, and Piura rivers, which supply water for the irrigation of some of the most valuable cotton plantations in the republic. Tumbez is the outlet for a petroleum-bearing district, which has given rise to an

* See the Author's "Peru."

oil producing industry of considerable importance, known as the Lobitos oilfields. Coming southwards is the port of Salaverry, connected with the important city of Trujillo, situated amid the fertile sugar-producing valleys of Chicama. This district is of archæological interest as having been the seat of one of the most ancient peoples of South America: that of the Chimus of Chan Chan, the ruins of whose buildings still exist, with an extensive acropolis from which were recently unearthed large quantities of beautifully moulded and patterned pottery, whose age has been conjectured at 7,000 years. Similar objects have been found at the acropolis of Ancon, and that of Pachacamac, both near Lima, which have yielded ancient *huacas*, or relics, for centuries. Eten, connected with Chiclayo, is one of the most important towns in the north of the republic, the centre of fertile valleys producing sugar, rice, tobacco and "Panama" hats. To the south of Trujillo and Chimbote the small ports of Casma and Huarmey are the shipping points for the rich silver mines of the interior, especially those in the valley of Huaylas, and for the products of the Montaña or forest region beyond the Andes, with some food produce for the coasting trade and Lima. Near Huacho, another minor port, are extensive salt pans, where pure salt is recovered from the sands by the process of evaporation, yielding some considerable revenue. The port is now connected by railway with Lima. Huacho is also a food-producing centre and hog-breeding district, but is additionally important as being situated at the mouth of a valley which gives ready access to the Andes, in a district containing vast beds of coal, to tap which and to give communication with the interior a line of railway has been projected. Such a line, according to the surveys, could ascend the slopes of the Andes at a maximum gradient of 2 per cent.

The whole of the northern part of Peru is capable of much greater industrial development. The mines of the coast range, such as those near Salpo, beyond Trujillo, where coal, copper, silver, and gold have long been worked, are worthy of greater attention. The district around Huaraz is full of promise, and the region of Recuay has long been

famous for its mines, but suffers from lack of railway transportation. The roads are generally execrable, the inhabitants of the hinterland being without the initiative to improve upon the rough mule-tracks that have served them for centuries, and over which all the considerable merchandise from the seaports, and the ores and produce brought down, have to be carried by mule-trains at heavy cost. There is no communication by rail at present between this part of Peru and the capital, although the Cerro de Pasco line, a continuation of the Oroya railway, might be continued towards Huaraz, and beyond. The mule trails from the coast to the Huaylas valley, and to the Montaña regions beyond, are obliged to pass the summits of successive ranges of the Cordillera at elevations of 14,000 feet and more, involving several days' journeying on mule back. Other important towns of this hinterland, equally difficult of access, are Yungay, Cajamarca, Chachapoyas, Huanuco, places practically unheard of by the outside world, but each the centre of districts full of possibilities for the future, enjoying generally an excellent, vigorous climate, and surrounded by a numerous native mining and agricultural population. There are some short lines of railway from some of the seaports of the northern part of the littoral, but they all die out on approaching the Cordillera.

In the interior of the department of Ancachs appears some of the most stupendous scenery in Peru: the extensive snowy range of the Cordillera Blanca, or white Cordillera, taking rank among the most striking mountain scenery of the world. Huaraz, which lies in the deep valley between the black and white Cordilleras, was an old Inca centre, and many vestiges remain of its former people, both in the town and scattered throughout the region extending to the Marañon, as described elsewhere. Passing the white range, descent is made into the huge department of Loreto, part of the Peruvian Orient or Montaña, which so far is without railway communication of any nature, and is much isolated from the governmental activities of the capital. The forests of Loreto, within a few days' ride of Huaraz, contain extensive plantations of the coca shrub,

whose leaves are greatly prized by the Indians, who chew them: and from which are extracted the salts of the drug cocaine, in the primitive factories in the district. The fall in the high price of the article, however, of recent years, lessened the local activity in its production. The capital of Loreto is the fluvial port of Iquitos, but this lies upon its eastern verge, on the navigable Amazon, as described in the chapter upon the Amazon valley, and is separated from the inhabited districts of Huaraz and the other towns mentioned by great stretches of almost impassable forests, swamps, and broken country. Nevertheless there exist vast areas of land, which, when communication may be established therewith, will be of great value as food-producing and colonising centres. The conditions of soil and climate are such that almost every kind of produce of the temperate and tropical zones may be raised. Sugar-cane, cocoa, cotton, and coffee flourish, fruits of all kinds, grapes, figs, oranges, pineapples, bananas and all else grow and yield abundantly; and there are vast grass plains, or *pajanales*, for cattle. Malaria is a serious disorder, but depends largely upon local and sanitary conditions. Many of the valleys merit the term of "regions of everlasting spring" which native writers are fond of bestowing upon them; but at present they are remote, and immigration does not yet find its way thereto.

The Peruvian capital, Lima, lies seven miles inland from Callao, and these governmental and commercial centres are far separated from the hinterland: too far for its efficient governance. In certain respects Lima may be considered the most interesting city upon the South American coast; principally as regards its history and traditions. The city exemplifies the Spanish-colonial type of capital, with the characteristic broad plazas, abundant and massive ecclesiastical edifices, and quaint domestic architecture, dating from the times of Pizarro and the viceroys. The great Plaza de Armas, dominated by the massive, handsome cathedral, founded by Pizarro and containing his remains, is the centre of the city, and good streets run therefrom, with other plazas and alamedas. One of the most typical

parts of Lima is the Plaza de la Inquisicion, where the fires of the Romish church, in the Autos de fe, worked their will upon heretics and Lutherans—the first of which was practised in 1573, followed by the benumbing influence of the appalling institution until 1813, when the news of its abolition in Spain was learned in Lima, and the populace destroyed the holy office, its instruments of torture, and all its works. The residential streets are of not unpleasing appearance, with their quaint and solid architecture, barred windows, and wide doorways. The splendid carved oak balconies and doors of the old mansions of the colonial period, and the houses of the viceroys, are fine examples of a bygone house-building art : matters which are generally more attractive than the somewhat garish modern style, in which showy structures of cement and stucco predominate. The fashionable drive and promenade of the Paseo de Colon, with gardens and statuary running down its length and public monuments at either end, lined by handsome dwelling houses, ranks as one of the finest in South America. Life is largely lived in flats, or viviendas, rather than in large houses, or at least by the middle class, and access to these is gained by open patios often adorned with shrubs.

The modern public buildings of Lima do not reveal evidences of wealth such as characterise the capitals of Argentina, Brazil, and Chile, for Peru has suffered, since the time of independence, serious impoverishment from which it has not yet recovered. Evidences of modern development are by no means lacking, and of late years public institutions have shown marked improvement, and new buildings and streets have grown up. The fine suburbs, residential watering places of Miraflores, Barranco, and Chorillos are evidences of some considerable wealth, and are reached by excellent electric tramways and railways. The population of Lima is about 200,000. This is considerably less than that of Santiago, the Chilean capital. Callao, the well-known seaport, with 50,000 inhabitants, is second as a commercial centre only to Valparaiso ; and its geographical position, central to an extensive range of seaboard, thousands of miles long, ensures its importance in the future development of

Photo *Underwood & Underwood*

LIMA, FROM SAN CRISTOBAL

western South America. Callao affords one of the few good harbours on the coast, its artificial haven being protected by the barren island of San Lorenzo. Business is there represented by about 400,000 tons of cargo annually, brought to or conveyed thence by ships of all nationalities, whose flags are seen in the harbour.

Lima is an administrative and residential centre. Peru is not a manufacturing country, except as regards cotton goods and sugar, although the government policy, as customary in all Latin American countries, is to endeavour to build up home industries by tariffs and other protective methods. There is no special product in the region such as has created the wealth produced by the nitrate beds in Chile, or the pastoral and agricultural exports of Argentina and Brazil. The soil in the vicinity of Lima is cultivable only under irrigation, and although the city is surrounded by fruitful farms and ranches, the welcome green region of the Rimac valley, these do little more than supply a portion of local requirements. The agricultural and mineral wealth of Peru is widely distributed, and not tributary to the capital as a whole, for no railway lines connect it with the outlying provinces as yet. Some of the most important mining regions, however, have their outlet through the city by means of the Oroya railway, which crosses the littoral and ascends the Andes. Ramifications of this important line are slowly being pushed out into the adjoining Andean valleys, where the production of mineral and pastoral wealth is being stimulated. The most valuable exports of Peru, however, are the sugar and cotton from the irrigated coast lands lying both to the north and south of Lima: some of which have been described.

The educated classes of Peruvian society reveal pleasing characteristics and qualities of refinement, hospitality, and courtesy. They are an artistic, musical, and literary people; and science and the professions are eagerly followed. Were it not for a certain lack of sincerity and the easy falling into double dealing in commercial and political matters, which is their gravest defect as a nation, the Peruvians might have become leaders of civilisation on the continent: but they

lost their wealth in the war with Chile and squandered the proceeds of the great guano deposit. In the times of their prosperity they became arrogant and corrupt. But the traditions of culture and history which centre about Lima are such as no other South American capital possesses, although they have been sacrificed in former years to luxury and lax methods, and to political enmities; which at the present time are far from being stilled. The women of the upper class are often strikingly handsome and attractive, and have indeed acquired fame for their vivacity: and they compare favourably with the leisured caste of any country. The native refinement of the Latin American woman is strongly typified in all classes in Peru. The poor are modest and respectful: the wealthy distinguished and charitably-disposed. Much is to be expected from this type of Latin American woman in the future.

The Peruvians take considerable pride in their educational establishments, but these do not reach, except in small degree, the poorer and semi-Indian classes, and by far the greater part of the population is illiterate. The middle and poorer classes by no means lack intelligence, and deserve a better lot. On the proclaiming of Independence, the hand of the Church, which had always been heavy, was lightened, and its anti-educational influence removed to some extent. Primary instruction is free and nominally compulsory, the schools being divided into two grades: a free course of two years, and a higher one of three, in "scholastic centres," the last including the learning of a trade. The private schools, which are numerous, contain three times the number of scholars of the public primary schools. For secondary education there are twenty-three national colleges for boys and three for girls in the various capital cities, with foreign instructors. For higher education there are four universities, with full faculties for professional and scientific teaching: law, letters, philosophy, science, medicine, mathematics, administrative, theology, and political economy. The university of San Marcos at Lima is a famous institution, the oldest in South America. The other three, which were also established soon after the Conquest, are at

Arequipa, Cuzco, and Trujillo. The San Marcos university originated in a grant from Charles V. in 1551 to the Dominicans. The school of medicine, which is one of the foremost educational institutions in Lima, was founded in 1792; the Cuzco university in 1598, and that at Arequipa in 1616. There is a naval school at Callao and a military academy at Chorillos—the handsome Lima suburb or watering place, and nine episcopal seminaries, one for each diocese; a national agricultural school near Lima and some commercial schools; also a correctional school for youthful delinquents. There are professional schools of civil and mining engineering of some importance, and young engineers are turned out in increasing numbers. The mining school is maintained by the taxes on mining property.

Whilst it cannot be said that the Peruvians as a whole are either great readers or producers of books—no Spanish American people are yet—some valuable works have been written in Peru, and there is a growing desire for information. There was a good deal of literary work done before the beginning of Independence, and the list of Peruvian authors in viceregal times is a long one. One author—Peralta—wrote more than sixty works, among them the epic poem "Lima Fundada." It is interesting to recollect, in this connection, that there is a native Quechua drama—pre-Hispanic—of Ollanta, of the times of the Incas. Peruvian geographers have done much in topographical work, especially Paz Soldan, 1821-1886, who wrote several standard books and a geographical gazetteer, also histories of the country and the Chilean war. There is a long list of legal, topographical, poetical, naturalist, archæological, literary, medical, and other Peruvian writers of more or less local or national fame, and much may be expected of Peru in the future. Lima has indeed certain claims to be considered the foremost city in South America as regards literary history. It was the principal seat of the Spanish viceroys, from which that enormous littoral, extending from Chile to Mexico, was governed. The "Ciudad de los Reyes," or City of the Kings, as it was named by Pizarro, its founder, after Juana and Carlos V. of Spain, was afterwards termed

" Lima," a corruption of the Indian name Rimac, of the river flowing through it from the Andes to the coast. The Peruvians have always been of a literary cast of mind, and indeed at times have been accused of verging on the effeminate—a characteristic derived not from the Spanish ancestry so much as from the admixture of native Quechua blood. The Quechuas were, and their descendants in the Andean highlands still are, a pensive, melancholy race, and these qualities were accentuated by the barbarous persecution of their governing Inca rulers by the Spaniards after the conquest. Thus it is that the idealistic and romantic character of the Spaniard was allied with the melancholy of the native, and the result is a strong literary tendency, sometimes quixotic, often neurotic, but capable of thought and aspiration which, in coming times, may be of much value to the great world of Spanish American life.

In their writings in the Press and in their various discourses the Peruvians are extremely eloquent, though to the Anglo-Saxon mind too much inclined to the grandiloquent and unpractical. Exaggeration is one of the failings of the Peruvian writer; and another is the tendency to philosophise upon commonplace matters. The Peruvian orator indulges in extravagant simile, and culls from the ancient classics to illustrate contentions upon very ordinary matters. Thus " glory " is generally " immortal glory "; " knowledge " becomes " profound knowledge "; and so forth. This, however, is a general Latin American trait, similarly pronounced in Mexico, Brazil, or Argentina. The newspapers and magazines encountered upon the tables of the clubs in Lima teem with sentimental love-verses, or with verbose adulations of public personages. Notwithstanding this, a practical side shows itself in the Press and in business life. The Peruvian is ever saying, " We must be practical "; and this spirit too often reverts to the materialistic, and sometimes to a neglect of the commercial code of honour. As to religion, it is strongly characteristic of these people that although such cities as Lima, Arequipa, and others are strongholds of Roman Catholicism, where the cult of any other religion is illegal, they plunge easily

from the mysticism of their own faith to the opposite extreme of materialism. This is also a condition of all Spanish America, so far as the men are concerned ; the women never or rarely secede from their faith.

The growing desire to be "modern" is now strongly influencing the Peruvians and is reflected in their Press. There are several journals in Lima which are of a high class, moderate in tone—except as regards party politics—with excellent news services and of refined literary character. In their way they are as good as many European newspapers, whilst the observer will miss with a feeling of refreshment the sensationalism of the Press of the United States. It is, however, to the 300 years of Spanish rule (and misrule) rather than to modern times that Lima owes her literary value and traditions. In some respects Lima is a veritable storehouse of history and tradition of viceregal days. Notwithstanding the crushing tendency of the Inquisition, the Peruvians were writers and poets, and preserved a refined and literary character. Printing was first introduced in the New World, it is to be recollected, in Lima, and the first printing press was established by the Jesuits, who arrived in 1567. The education of the people, however, was kept in the hands of the priests. The numerous churches and other ecclesiastical institutions bear witness to the strength of the clerical regimen, as do the solid structures and air of attractive mediævalism of some of Lima's streets to the viceregal influence. Many of the old churches and conventual establishments are exceedingly beautiful and interesting. There are various modern institutions of a literary and scientific character in Lima which show the Peruvians to be a thoughtful people, and that furnish evidence of a desire for a sounder character and development. The public library, founded in 1822, was, and still is, among the foremost of such institutions in Spanish America. The ruthless havoc wrought in 1881 by the victorious Chilean army, which used the building as a barracks and permitted the destruction or sale as waste-paper of valuable books and priceless manuscripts, was largely remedied by the work of a Peruvian man of letters, Ricardo Palma, who re-formed

the library. Lima possesses a Geographical Society, which does important topographical work in the exploration and description of the enormous territories of the Republic; the Athenæum, or literary club, an Historical Institute, which, among other work, investigates and records matters concerning the early Inca and Aymara civilisations; and, as described, societies of industry, engineering, medicine, mining, music, literature, agriculture, and kindred subjects. As regards their language, the Peruvians speak possibly the best and most pleasing Spanish, or Castellano, encountered in Spanish America, in great contrast with the brusque but more virile accent of their neighbours, the Chileans.

Among famous names in the literary and scientific field, that of Antonio Raymondi stands out prominently, and his works on the natural history, resources, and topography of Peru are still the standard authorities. Now, however, the government is earnestly endeavouring to explore and survey the country, the greater part of which consists in inhospitable mountain ranges and uplands and dense forests, in contrast with which Lima, in its peaceful setting in the equable climate of the Pacific littoral, stands out sharply.

Religious practices in Peru must be regarded as in a more or less mediæval condition. Religion is a strong force in the life of the educated classes, or at least among the women, and the influence of the priest and the Church still paramount. Among the Indians this priestly influence is extremely strong. The exercise of any other religion or attempts at proselytism is against the Peruvian constitutional code, under which, as enacted in 1860 "the nation professes the Apostolic Roman Catholic religion: the state protects it, and does not permit the public exercise of any other." It is time that Peru should throw off this bigotry. A certain amount of tolerance in Protestant worship exists, and in Lima and Cuzco there are Anglican churches belonging to the diocese of the bishop of the Falkland Islands, which embraces the whole Pacific coast of South America. But these, in reality, are illegal, and their existence is ignored rather than permitted. Their representatives in Cuzco have sometimes gone in fear of their lives, and even in

villages near Lima representatives and colporteurs of foreign Bible Societies have been hounded out of the place by mobs aroused by fanatic priests, who toll the church bell and warn the populace. It is not necessarily Peruvian statesmen, or even the upper enlightened class, who oppose the advance of Evangelical teaching, but the priests, who fear the loss of their influence and power. After the Putumayo occurrences various missionary organisations came to being in England with the purpose of sending out missions to the rubber forests ; but great difficulties were anticipated by the Protestant Mission, due to the illegality of the establishment of such in Peruvian territory. As indicated elsewhere, the character of the native *cura* in the uplands and his mode of life have been subject to strong criticism. Celibacy is honoured in the breach more than in the observance ; a condition which, however, need scarcely call forth the censure, save as a matter of principle, of the common-sense observer. To condemn man to live without woman, especially under the social conditions existing in Latin America, ought to call forth now the condemnation of moralists, hygienists, and all practical thinkers.

As regards its ecclesiastical organisation Peru is divided into nine dioceses : Lima, which is an archbishopric, Arequipa, Puna, Cuzco, Ayacucho, Huanuco, Huaraz, Trujillo, and Chachapoyas : subdivided into more than 600 curacies, whose officiating heads are the town and village *curas*, or curate-vicars. In each diocese is a seminary for the education of the priesthood. Arequipa is a stronghold of clericalism, and, like several other such centres in South America, exercises an influence in politics as well as religious matters. The monasteries and nunneries are numerous and are often the seat of much charitable work. Indeed, religion in Peru greatly inculcates charity, as in all Latin American lands, and others where the Romish Church holds sway : and this and other good elements, such as the considerable good home influence, must be weighed in the balance against the palpable evils of the system. The educational work of the convents is to some extent an obstacle to the better development of the public school system in Peru. There

are various charitable institutions in Lima, and hospitals: but the regimen of the latter often leaves much to be desired. The Church *fiestas* or feast days are kept with pomp and ceremony in the towns, and in the capital, on such occasions, the president and his suite, attended by the military and surrounded by mule-batteries, are special evidences of Easter time in the great plaza of Lima.

In the Spanish American countries at Easter time, and during other important church functions, the streets and churches present an animated scene. The people flock to the churches, visiting as many as possible—as many as seven, if time and opportunity permit—and the buildings are crowded, whilst the most elaborate and solemn ceremonies take place. The atmosphere inside the temples becomes suffocating, especially when there are many of the working or Indian class within. On ordinary occasions these latter sit upon the floor in the temple, with the utmost placidity, or bend low over the stone or earth pavement, or adore the waxen images; and holy processions take their way, heavy platforms with life-sized figures in tableaux thereon, carried by Indians concealed underneath by draperies, the heavy daïs being borne by its invisible bearers through the principal streets, forming the main object in the procession of priests and people. In marked contrast is the resting-place of the dead in these communities. The public cemetery, or "Campo Santo," is often in a dismal, barren position upon the arid ground outside the town. The graves are uncared for, a few straggling and primitive wooden crosses mark the mounds, which soon fall away, and the place is neglected. The Latin American character appears to regard tombs with little veneration. There are no green churchyards, such as are the delight of the English village; no ivied walls, or planted graves or headstones. The dead are put away and forgotten; and the Campo Santo strikes a note of melancholy which the foreigner does not soon forget. In the capital cities, however, in some instances, there are well-laid-out cemeteries.

The people of Lima are pleasure-loving, like all Latin Americans. Theatres, bull-fights, lotteries, horse-racing, and

music are among their principal pastimes. The bull-fights are eagerly attended, especially when some famous Spanish *matador* or troop of *toreros* is announced. Horse-racing, however, is replacing this sport among the upper classes to some extent. The race-ground and grand stand of Lima is a fine and well-situated institution, and is crowded with the fashionable on race days, when a good deal of money changes hands. Lottery ticket vendors crowd the streets and deafen the passers-by, thrusting the tickets into their faces. Old men and women of the poor or broken-down class, and young boys and girls, are those who principally ply the trade, and the whole public purchases tickets. The hope of winning a stake in a lottery is nourished by all classes. A show of morality or claim of extenuation is kept up for the practice by awarding a portion of the proceeds of the affair to the Beneficencia Publica, or Public Benefit Institution.

The various clubs of Lima—the National, the British, the Constitutional and Spanish and Italian—are generally well-kept institutions, the first being housed in a handsome palace, forming the main centre of polite club life. There are various modern hotels in the city, generally controlled by Italians and Frenchmen. The carnival is a singular survival of a form of amusement in Peru. For three days every year the whole of society and the populace appears as if demented. Street passengers and tram-cars are deluged with water and bags of flour from balconies as they pass, and indeed the streets are impassable. Riotous fun is permitted in private houses and between the sexes, which, whatever its defects, has the effect of bringing about an added intercourse among people who are often inclined to be too formal. Carnival is equally carried on in the interior towns: and even in remote hamlets bands of painted and drunken Cholos and Indians are encountered marching about, to the accompaniment of primitive music: revelling for the moment in organised disorder.

South of Lima and Callao are small ports serving extensive sugar and cotton plantations, such as Cañete and Pisco. Ica, a few miles inland from the last-named port, is surrounded by a broad, irrigated valley, forming one of the

best agricultural parts of the republic, producing cotton and wine, both of excellent quality. Pisco is one of the most important seaports of Peru. Southward the ports and valleys are smaller, although there are large valleys capable of increased irrigation and production. Wines and brandies are produced in these valleys, and some minerals. The improvement of irrigation of these districts necessitates a considerable expenditure of capital. The engineers of the government have made a detailed study of the irrigable tracts, and concessions are obtainable for their development. Peru is already one of the most advanced of the South American countries in scientific irrigation. The port of Mollendo in southern Peru is the outlet for an extensive region served by the southern railways system, and is the port of entry and outlet for Arequipa and the Titicaca district, and the vast Montaña region beyond, with extensive resources of goldfields, rubber forests, and coffee, chocolate, sugar, and other products. Mollendo, however, is one of the worst ports on the coast, and during rough weather landing is dangerous and at times impossible. It has long been intended to remove the railway terminus to a more suitable haven not far away. The selection of Mollendo as a terminus was partly due to financial corruption when the line was built—an error whose results have been long visited upon the country. South of Mollendo are the valuable districts of Ilo and Moquegua, followed by the pleasing seaport of Arica, of terrible memory in the Chilean war.

The mild and equable climate enjoyed by the coast towns of Peru, gives place to more bracing and at times severe and inclement conditions of temperature in the rest of the Peruvian cities, which are situated at considerable elevations above sea level. Arequipa occupies a midway position between the coast and the Sierra. It lies 75 miles from Mollendo, at an elevation of 7,850 feet, and enjoys an invigorating climate, with blue skies and generally healthful environment. This, together with the character of its dwellings, which are built of the volcanic freestone that abounds in the region, creates a pleasing impression. The other Peruvian cities, forming the capitals of the various

departments or states, generally lie in remote valleys among the mountains, and are in some cases very difficult of access from the seaboard. Most of these towns are unserved by any means of communication except primitive mule-trails: but railway extensions in the last few years have reached a few of the more important. The advent of the locomotive in the remote and difficult valleys of the Andes is regarded in those communities as a triumph of engineering skill, and greatly appeals to the imagination of the inhabitants.

Chief among the Andean cities of Peru are Cajamarca, Cuzco, Puno, Huancayo, Jauja, Abancay, Huancavelica, Ayacucho, and Cerro de Pasco; all of them being of some historic or peculiar interest. Cajamarca is in the north, 500 miles from Lima: a mountain town, at an elevation of nearly 9,500 feet above sea level, and was the scene of the conquest of Peru by Pizarro, and of the death of Atapualpa, the last Inca emperor. It was at Cajamarca that Atahualpa, imprisoned by the Spaniards, reached up to a line upon his prison wall and promised to fill the room thereto with gold, if the Spaniards would release him: an offer he fulfilled, only, however, to be murdered.

Cuzco, the capital of the old Inca empire, lies almost a similar distance to the south of Lima at an elevation of about 11,500 feet, and is a populous place, now reached by the southern railway extension from Puno, upon Lake Titicaca. Cuzco is surrounded on every side by mountain peaks, which overhang the old Inca capital, once the centre of perhaps the most benevolent monarchial rule the world has ever known, as described elsewhere. The intensive cultivation of the soil, which was carried out on the terraces banked up on the mountain slopes around Cuzco, supported a large population; and the old temples, seme of which remain in part, the walls, with their gigantic stones, the bridges and fortresses are all witnesses to the development of that ancient regimen which the Spaniards overthrew. The population of Cuzco has decreased greatly since those times, but the city and province is still one of the most thickly peopled parts of Peru. The convent of

Santo Domingo is of religious interest, upon the site of a former Inca temple, with an altar upon the spot once occupied by the sacred emblems of the sun-god. The cathedral of Cuzco, built at the beginning of the seventeenth century, is a notable specimen of Spanish-colonial church architecture, with a high altar covered with silver. Cuzco is also the centre of a fertile agricultural region, and chocolate and coffee are brought in from the lower valleys of the Montaña—a region of great possibilities.

The town of Puno lies 12,650 feet above sea level, on the edge of the lake, and 825 miles from Lima. Cerro de Pasco lies north of Lima, near the terminus of the Oroya railway, 175 miles from the capital, and is the greatest mining centre in the country. The mines were long famous for their produce of silver, and at the present time are large producers of copper: the new smelting works being among the foremost in South America. It has been asserted by the American capitalists and experts who control the Cerro de Pasco enterprise that the mines form the largest deposits of copper ore in the world. The town stands on the borders of lake Junin, 14,400 feet above sea level, and suffers as to its climate by reason of the excessive cold and altitude.

The remaining large towns lie in the great longitudinal valleys of the Andes, in some cases overtopped by the snow-crowned peaks, which near Huaraz rise to more than 22,000 feet altitude. Huancavelica is the centre of the great quicksilver mines which were extensively worked in the time of the viceroys, and were described as "one of the brightest jewels of the Spanish crown": and the supplies of mercury they yielded made possible the working of the silver mines throughout Peru and Mexico during that period. But the great cavernous mines of Huancavelica fell in and buried 500 miners, whose bones remain there to this day. Urged by a jealous and incompetent viceroy to produce more quicksilver, the head miner removed the ore columns which supported the workings, and, these gone, the mine collapsed, bringing death to the great working population beneath, crushing them and their underground chapels, galleries, and storehouses. At present the town of Huancavelica is

difficult of access, but the railway from Oroya and Huancayo may ultimately reach the city, which lies at an elevation of 12,550 feet, 220 miles distant from the capital Huancayo is an important place in the fine Jauja valley, now reached by the railway from Lima and Oroya : it is one of the largest market towns in the republic, and the centre of a considerable population, mainly engaged in agriculture.

The distant towns and communities of the Andes of Peru, like those of Bolivia, Ecuador, and Colombia, present to the traveller who refuses to be overcome by their remoteness and peculiar *triste* * aspect much of unique interest. Their picturesque aspect, the bright skies and invigorating atmosphere which alternate with the heavy rains and cold winds, and the primitive population of Indians and Cholos, with typical dress and primitive habits, are subjects of study which counteract the melancholy atmosphere induced by the half-ruined buildings and general lack of comfort. The half-pathetic endeavours of the small upper class to keep abreast of the knowledge of the outside world and to appear conversant with the doings of civilisation, together with their pronounced trait of hospitality towards the well-informed traveller or foreigner, offset their tendency to double-dealing in business and the other defects of their character and environment. These people are not sunk in irreclaimable stupidity nor dominated by any form of social or religious fanaticism, as are certain peoples and races of the Old World; and they may be regarded as communities waiting but the opportunity to germinate and develop.

The great variations in climate, fauna, flora, and all else in Peru due to elevation, are very striking. The traveller, even within a day's ride on mountain trails, may pass from the cold plateaux and snowfields to valleys where orange and lemon groves abound; or, in a couple of days, from the haunts of the condor and vicuña to the forests where tribes of monkeys dwell. In ascending from the warm coast lands upward to the temperate zones, and among the deep valleys of the hinterland, a variety of valuable products and delicious fruits is encountered under cultivation; and a

* The Spanish word *triste* is one used by the inhabitants in this connection.

flora including many plants familiar in Great Britain. Of fruits: bananas, pomegranates, paltas—most delicate flavoured of fruits, known in Britain as alligator pears (the *anacardium occidentalis*)—chirimoyas, melons, grapes, oranges, peanuts, etc. A scanty pasture is encountered, and cacti of various forms: and scanty timber, such as the *quishua*, in the ravines. The warm zone is left at 6,000 feet, and above it, up to 11,500 feet, maize, barley, wheat, potatoes, alfalfa, and *quinua* are found; and buttercups, violets, lupins, geraniums, pelargoniums, and other flowers growing wild; also apples, pears, cherries, and other familiar fruit under desultory cultivation; and the mountain ash, oak, hawthorn—generally all stunted. The maguey—valuable plant—abounds, and the nopal or prickly pear; and the uplands are the home of the potato. The *punas* are covered with the *ichu* or long grass, so valuable to the natives: and in the lagoons are tall sedges or rushes, of which on Titicaca the Indians make their raft boats. Above this, at 13,500 feet, the hardy barley no longer grows, and maize does not ripen. There is no alfalfa, no timber. The mighty *cactus giganton* is seen, but is becoming very rare, and will soon be lost to botanical science. The singular yareta, (*azorella umbelliferae*) especially on the Bolivian and northern Chilean *punas*—appears, like a vast brown mushroom or cauliflower, up to three feet in diameter, of a woody texture, full of resin and forming a valuable fuel, growing upon the bare rocks, in monstrous lichen-like fashion. This strange plant or fungus is rapidly disappearing, due to its use as fuel; and it is of very slow growth. A few low, thorny shrubs are seen sparsely, and the lower limit of the snow is reached, with a few curious plants adapted to resist the cold, which open their humble petals in the snow, and some cryptogams, the only vegetable inhabitants of this Andean world, antarctic through its elevation. Above, all is bare. The rocks or the glaciers rise beyond: the organic world is exhausted; its only living creature is the occasional majestic condor; and the sun rises or sets upon an inanimate world.

But it is a world full, nevertheless, of splendid atmospheric

effects and curious phenomena. These vast high uplands are storehouses also, of hydraulic powers, and of latent electric energy, which is strongly manifested at times: and there must be yet undiscovered uses, sources of power and elements unsuspected at present, but some day to be available, upon the high plateaux of the Andes.

The Cholos of the uplands are an extremely hardy race of people, forming a class of small peasant proprietors, perhaps among the hardiest and most independent in the world. They wrest a living from among rocks and thorns in their small *chacaras* or holdings, in a way which is a veritable revelation of the possibilities of primitive agriculture. Their life is of the simplest, and their habitations and possessions of the most primitive and meagre: a stone-built hut, its walls formed of unhewn blocks dug from the mountain strata or collected from the *talus* of the slopes, the roof of thatch on poles obtained with difficulty from the twisted limbs of the *quishua* trees, which grow scantily in the ravines, or the dried stems of the cactus; the covering of the *ichu* grass whose tall tufts cover the high *punas*. Notwithstanding the cold, there are no doors to these huts, but a blanket is hung across the aperture at night, or when the owner and his family are away at their toil or minding their flocks, and this forms a sufficient protection for people who do not fear the rigour of the climate, nor who would ever dare to violate the sanctity of a dwelling by entering when its guardians were away. These people, throughout Peru, Bolivia, Ecuador, and part of Chile, retain many of the customs of their Inca forbears, inherited from the wonderful agrarian system, which is described in a subsequent chapter. They still form and cultivate the terraces on the hill slopes, the "Andenes," which are so prominent a feature of the landscape, with their rough stone walls. The Cholo and Indian agriculturists are almost entirely independent of the Peruvian governing or mestizo class, whom they regard as "foreigners." Civilisation as interpreted by Peru can give them little. Around the stone-built huts the *chacara* produces maize and alfalfa, up to those elevations where such will grow; barley, *quinua*, and

potatoes beyond; and no place is too inclement for their labours. They and their women weave all their clothes from the wool shorn from their own mountain sheep or llamas, spun in little hand spindles which the women incessantly twirl, even when far afield minding their flocks; and woven in the looms which have come down from the times immemorial of the Incas. They are barefooted, or shod with sandals, home made. There is nothing for their primitive wants—except alcohol and tobacco—that they cannot produce from the soil. Bread they do not have: only toasted maize or *cancha*. They pay neither tax nor rent, and make no contribution to the corporate life of the republic. They are veritable children of the soil. The Cholo woman at the time of childbirth may be alone in her hut, if that be situated in a very remote spot: but she gives birth, and herself gets up and even goes out to collect wood to make a fire and heat water wherewith to wash the babe. Fuel, in these places, consists in the scanty bushes of the ravines, for timber does not grow to any size in the uplands; the *ichu* grass, and the dried dung of the llama, known as *taquia*. This last-named material has remarkable calorific properties, and in some of the mining districts is even collected in large quantities and used for the smelting of silver ores, and forms in such situations the best and cheapest fuel available. This marked independence of the upland people does not make for civic advancement. They work for the Peruvians if they wish, or let employment alone, according to their desire. They are amenable to kindness and justice, to both of which they are strangers as a rule from the governing race, who regard them with a certain amount of contempt, and as subjects for mere service. What vices they have, have mainly been acquired from the whites and mestizos. The traveller—and he is a rare passenger in the remote districts—who approaches their villages or solitary huts, will often have difficulty in obtaining fodder for his beasts or supplies of any nature for himself. Money often has no value, and in vain he will offer Bolivian or Peruvian silver coin in exchange for eggs, chickens, or alfalfa: and if he be a student of economy the lesson is not

Photo *Underwood & Underwood*

A Group of Llamas in the Plaza at Cuzco

without some value—that money is without purchasing price among a self-contained and self-supplying people. To do them justice they will often bring out food or fodder from a sense of native hospitality, rather than from any commercial instinct. These traits, however, disappear where more frequent contact with outside people occurs, and they become tricky and exorbitant, and even lying and deceitful —largely as a measure of self-protection. But, as observed elsewhere in these pages, the Cholos are a useful race, and none other could replace them in their peculiar habitat, or perform work in these high regions, which can only be carried out by those who have paid nature the homage of being born upon the soil. If they are to be encouraged to increase and multiply—and they are naturally prolific, although infant mortality is very heavy due to their lack of knowledge and the rigorous condition of life—it will be done not by any system of commercialism or exploitation, but by kind example and precept in matters of the betterment of their simple life. Nearer the larger towns the people, men and women, driving their donkeys or llamas, crowd in on market days and church days, or *dias de fiesta*, with their produce to sell, clothed in bright-hued *ponchos*. That is also the harvest of the local *cura*, who reaps rich reward in tithes and offerings from his flock, the simple and superstitious Indian of the uplands.

Typical of the Andean uplands is the Titicaca plateau. Lake Titicaca is a hydrographic system of much interest. With its sister lake Poopo or Aullagus and the connecting Desaguadero river, the system affords a valuable waterway serving that part of Peru and Bolivia : and the steamers which ply thereon run in connection with the railway systems from the coast. Lake Titicaca is 165 miles long and more than 60 wide, with a greatest observed depth of 892 feet : lake Poopo is 55 miles long, and 25 wide, with a depth of only 4 to 13 feet. The first drains into the second through the Desaguadero, a system like a cup overflowing into a saucer with their brims at a level, so deep is Titacaca and so shallow is Poopo. The elevation of the surface of lake Titicaca is 12,370 feet above sea level ; it is fed by the

snows and streams of the higher Andes, in conjunction with other smaller lakes ; and the whole lake basin is a surviving one of a series which formerly occupied other inter-Andean valleys and plateaux. Although a considerable volume of water constantly flows through the system into Lake Poopo there is no outlet to the sea, the waters being absorbed only by the process of evaporation, which is very considerable at that elevation, and by seepage. It has been surmised, however, that some subterrannean outlet might exist. In earlier times the lake must have been even more extensive, and, as described elsewhere, may have reached the famous Tiahuanako ruins in Bolivia. Its outlet in former periods was to the east through the gorge of La Paz. Titicaca is of vast archæological interest, as later described. Another high lake of Peru is that of Junin, close to Cerro de Pasco, 36 miles long and 13,230 feet above sea level ; also Parinacochas, 12 miles long, near the base of the snowy Sara Sara peak, but it is little known. On the great *punas* around these lakes and elsewhere, the traveller journeys for days through vast quartzite areas and treacherous bogs, often without sight of human habitation ; and with its broken uplands, deep valleys, and snowy peaks Peru might well be termed the Tibet of America : a comparison which is heightened by the Asiatic physiognomy often of the Quechua and Aymara Indians, who are the inhabitants of these high regions : and who seem to bear out in their faces the theory of an early Tartar peopling of America.

Peru and the other Andean countries are singularly free from ferocious or noxious animals. The most aggressive enemy of mankind, and this only in certain districts, is the mosquito. The puma and a small black bear are occasionally encountered in the higher regions, and the jaguar in the Amazon lowlands ; and the vicuña and deer on the uplands. The scorpion or alacran and the centipede are encountered in the warmer zone. Snakes are rarely seen. The guinea-pig, or *cui*, is an article of diet among the Indians, as also the viscachas or rock squirrels, which abound in places ; and partridges are found in the uplands. There is no teeming animal life such as Africa affords, except in the

hot lowlands of the Amazon, upon the rivers. In the streams upon the Pacific slopes the camaron, a large fresh water prawn, abounds, and is considered in Lima and elsewhere a great delicacy. Scarlet feathered flamingoes haunt the upland lakes, and other wild fowl ; some of edible value. The Chinchilla, especially towards the south, is a native of the cold lands, well known for its valuable fur. It is extremely prolific, like its relative the viscacha.

Except for a comparatively few adventurous spirits, mountain climbing among the great snowy peaks of the South American Cordillera has not attracted much attention, nor become the pastime which the Alps furnish to the European traveller. The Andes are too remote for the ordinary ambition, and the general difficulties of travel in Spanish American countries such as deter any but those of special aptitude. In the Alps, civilisation presses up to the foot of the perpetual snows, and villages, hotels, and guides are within easy reach. It is not so with the Cordillera of Ecuador, Bolivia, Peru, and Chile, where the snowy peaks rise from among uninhabited deserts in most cases, or sterile plateaux, where the primitive hut of the Indian often offers the only hospitality to be secured after arduous leagues in the saddle. The Andes offer their own peculiar attractions in their magnificent solitudes, and what they lack in being unclothed and treeless is made up by glorious cloud effects and often cloudless skies, and a certain attractive environment consequent upon the character of the native inhabitants, and the vestiges of an ancient civilisation. In Ecuador the completion of the Quito-Guayaquil railway has rendered of much easier access the great peaks of the Andes of Ecuador, such as Chimborazo and others, but in the four thousand miles of Cordillera stretching southward through Peru and Chile, there are extensive regions without any means of communication except the primitive mule-trails, separated by wide stretches of desert, as approached from the coast.

Apart from the risks and discomforts of travel in these regions is the added difficulty of mountain sickness, known as *soroche*. This is partly due to the diminished pressure on

the brain and other organs, consequent on the rarefied air ; for at such elevations there is but the weight of half an atmosphere. *Soroche* takes the form of severe vomiting and excruciating headache, in its worst phases, the nausea being somewhat similar to sea-sickness. Persons of weak heart are advised not to attempt elevations much above 8,000 to 10,000 feet in the Andean countries. Yet some of the largest towns of the interior are situated at higher elevations, and there are villages which might look down, as from their altitudes, upon the summit of Mont Blanc. The highest inhabited places on the globe are, in fact, encountered in Peru and Bolivia. Many people are immune from the *soroche,* but others are unable to withstand it and are utterly prostrated. Death has ensued in some cases. Bodily and mental agitation should be avoided in expeditions at these great elevations ; alcohol should be used sparingly, or not at all, and the same may be said of tobacco. The face and neck should be enveloped in some warm material whilst journeying, and the knitted masks made by the Indians, which they wear themselves, and the boas of vicuña fur are among the best means of protection from the keen atmosphere of these high inclement regions of sparsely inhabited plateaux and perpetual snow. The natives put forward various remedies against the *soroche.* One of these* is the nibbling of cakes of the native brown sugar, which forms an important part of the diet of the Indians of the uplands. The chewing of the coca leaf, another of the most highly prized commodities of these people, is also recommended. The mastication of this, of course, liberates a small portion of cocaine, the drug which is made from these leaves. The powers of endurance which the Indians derive from the mastication of these leaves is remarkable. *Soroche* does not only depend upon elevation : it is more severe in some places than others at similar altitudes, due to local causes.

A further malady to be guarded against in the snowy Andes is that of snow-blindness. The ordinary blue spectacles are the best preventative, but the natives often adopt

* Found efficacious by the author.

the method of painting a dark circle round the eye, which apparently has some beneficial effect against the glare. A severe attack of snow-blindness causes the face to swell severely under the eyes ; so much so that sight is temporarily lost. This malady is known locally as *serumpe*, and a remedy is there used in a certain root boiled and mashed and applied as a poultice. The mountain sickness or *soroche* is felt even by passengers upon the high railways such as the Oroya and other lines, and whole car loads of passengers are afflicted at times, on reaching the higher elevations, with headache and nausea.

The change from the bleak highlands of the Andes, the sterile, treeless *punas*, to the warm intermontane valleys, and lowlands of the eastern slope, is very rapid. The Montaña of Peru produces all the fruits of the tropics. Sugar cane, chocolate, cotton, and coffee are cultivated, but the difficulties of transport have prevented rapid development of the region. The chocolate is of excellent quality, as is the coffee. The sugar is consumed locally. In this Peruvian Montaña, in its upper regions, nature has been lavish of her products and opportunities. The rancher who may take up his abode there, with a small amount of capital, may rapidly acquire estates and wealth. Abundant harvests of almost every known product can be raised in a minimum of time. It is sufficient to cut down and burn the brush and scratch the soil and sow with any seed, to recover returns of a hundred for one. Sugar cane, vines, maize, cocoa, coffee, and a host of products can be raised. The sugar cane, once planted, yields perpetually: some existing plantations being more than a hundred years old. The cane frequently measures 30 feet in height, and is cut seven to nine months after sprouting.

The rivers of eastern Peru, which have been described in the chapter on the Amazon valley, are valuable means of communication for the Montaña region, and are indeed often the only means of transport. This great network of waterways, navigable for canoe, raft, and steamer, intersect vast areas of territory at present uncultivated, but of much value for the future. These great lands, some forest-

covered, others open plains, are capable of cultivation and food production on a large scale. At present the difficulty of access and of getting in supplies or taking out produce present a barrier to economise development : and notwithstanding the possibilities of fluvial transport, the region cannot progress until it is approached by railways. The cost of roads and railways in such territory is naturally heavy, due to the broken nature of the ground and the considerable rainfall ; but it is only a question of time, possibly the near future, when these remote territories will be as valuable in their way as the lands of Canada and the United States, or those of Argentina. Concessions from the government of these lands can be obtained under railway or road-buildings obligations. The aggregate navigable length of the Peruvian Amazon waterways is calculated, for all kinds of craft, at 20,000 miles in the rainy season : as described in the chapter upon the Amazon valley, falling to 5,800 miles in the dry season. A system of wireless telegraphy has been established through the Montaña to Lima from Iquitos, upon a German plan.

The cocaine shrub is largely grown, both in the northern Montaña, as before mentioned, and in the southern, and no other part of the world produces it ; it being peculiar to the upper Amazon valley of Peru and Ecuador. Another famous product is quinine, indigenous and peculiar to Peru and Bolivia. Quinine was just brought to notice from having been used as a remedy for the wife of a Peruvian viceroy—Chinchon—who had fallen ill of a tertian fever, and it was known as chinchona afterwards. Its qualities, however, had been earlier known to the natives : as were the sustaining qualities of the coca shrub leaves. The price has fallen due to the plantations made in Ceylon, at the initiative of the British government. Coffee is also a valuable product of the Montaña, and in the Chanchamayo valley a British coffee growing colony was established years ago, but did not flourish very freely, due to difficulties of transport.

The rubber of the Montaña is one of the most valuable products of Peru, but the rubber forests are still of difficult access. The matter is more fully dealt with in the chapter

upon the Amazon valley. Peru has suffered greatly, as regards her national reputation, by reason of the Putumayo atrocities in this connection. It was something of a terrible irony of fate that in a land whose people for unknown centuries, and up to only four hundred years ago, lived under social laws "so beneficent as had never been known under any ancient kings of Asia, Africa, or Europe, or under any Christian monarch"—laws recorded by a reliable historian and capable of verification by the traveller and student to-day—should, in the twentieth century, have been the scene of the ruination and wholesale torture and murder of tribes of its defenceless and industrious inhabitants. Under the Incas of Peru, as recorded by the Inca-Spanish historian, Garcilaso de La Vega* and other early writers, human blood was never shed purposely; every inhabitant was provided for, and had a place in a well-ordered social economic plan; there was no such condition as beggary or destitution: the people were instructed by statute to help each other co-operatively; injustice and corruption were unknown: and there was a belief in a Supreme Director of the Universe. Under the Peruvian republic and the regimen of capitalism to-day, tribes of useful people of this same land have been defrauded, driven into slavery, and destroyed, and in some cases they were tortured to death under the mandates of task masters in the employ of a foreign company—under a republican government, in a Christianised country (in one case at the behest of the native agents of a company with headquarters in London): the "crime" of these unfortunates being that they did not always bring in rubber sufficiently fast—work for which they practically received no payment—to satisfy their taskmasters. In order to obtain rubber, so that the luxurious tyred motor cars of civilisation might multiply in the cities of Christendom, the dismal forests of the Amazon have echoed with the cries of despairing and tortured Indian aborigines. These were not things of the imagination, but actual occurrences, as set forth by the witnesses. The Peruvian government had long known of

* *Vide* "The Putumayo; the Devil's Paradise": matters not necessarily discredited by the notorious Casement affair.

the abuses committed upon the Indians of the mainland, but had neglected to remedy them; and through influence or connivance the chief culprits escaped or were exonerated. Rubber has left a dark stain in Peru which it will take long to eradicate; and Bolivian rubber has had a similar reputation, if in lesser degree; and under the curtain of the forest abuses still exist.

The principal source of Peruvian wealth is agricultural, not forestal or mineral: the native population being essentially land-working, and the Cholo easily deserts the mine for the *chacara* or farm. Many of the Cholos of the interior are, as described, "small holders," and have been so from the time of the Incas: and they are protected to some extent by law, in order that their holdings may not be alienated. Most of the best land, however, of the coast and the valleys is in the possession of large wealthy landowners, who do not sell or subdivide. The value of the sugar export is more than £2,000,000 per annum, and a very high yield is obtained from the soil, superior to almost all other lands. The cane can be cultivated on the Pacific slopes up to an elevation of 4,500 feet, but the lowlands show the best plantations: and to 6,000 feet on the Amazon slope. The cane growing is largely farmed out to small farmers, and the cane purchased by the mills; rent, tools, etc., being paid on a percentage of the produce. The rum manufacture is a source of considerable profit. British capital is largely interested in the sugar estates, especially near Cañete, at Santa Barbara, and in the north, near Chimbote. The British Sugar Company at Cañete produce about 30,000 tons of sugar per annum. Sugar machinery of the value of £25,000 was imported into the Department of Lambayeque in 1911, from British sources.

Cotton, like sugar cane, requires artificial irrigation, as described for the coast valleys. Peruvian cotton has an excellent name in foreign markets, and the production is increasing; new lands being placed under irrigation. The varieties of cotton cultivated in Peru are the Egyptian or "Gossypium herbaceum," grown in the Valley of Lima and Ica, the plantations being found from the seashore to some

Indians of the Peruvian Amazon

sixty miles in land; the "Gossypium Peruvianum," or native cotton, grown near Piura and Ica; and the "Gossypium carbardense," with its varieties known as Sea Island and Mitafifi, grown near Huacho and Supe. The kinds of cottons from Peru best known on the British markets are the full rough Peruvian, which comes from Piura, and the moderate rough, which is produced in Ica and exported from Pisco.

There are seven large cotton-producing mills in the republic, which supply more than a quarter of the cotton goods consumed. British capital controls the Vitarte mills and plantations, which are situated a few miles to the east of Lima, irrigated and actuated from the river Rimac. New appliances have recently been installed which will further curtail the imports, especially of dyed fabrics, from England. The Piura region is, however, the most important cotton producing centre. Peru ranks twelfth among the cotton producing countries of the world. The average annual importation of cotton goods—1907-8-9—was of a value of £600,000, of which 57 per cent. was of British origin, 18 per cent. German, and 3½ per cent. American.

Alfalfa, quinua, potatoes, olives are other important products, and wheat and fruits might be more extensively grown.

The cattle, live stock, and wool industry of the uplands is of some importance, with ranches containing many thousands of head of cattle. The cattle are small and bony, and the *puma* sheep small, but some attempts are being made to improve the breed. Good mules are raised, and small, but wiry horses, both adapted for the mountain travel. The famous llama abounds in the uplands, its native home, and both the llama and alpaca, which much resemble each other, are exceedingly valuable for their wool, whose export is made principally from Arequipa. The llama is the most prized possession of the upland Indian, who almost alone understands its breeding and maintenance. The llama of large size reaches 6½ feet to the head. It is a beast of burden, and performs all the carrying trade in certain districts. It is exceedingly docile and costs nothing to keep,

as it feeds on the natural pasture; and its peculiar and graceful figure is the most common object of the high bleak uplands of Peru and Bolivia. The vicuña, a relative of the llama, is also encountered in large bands, but in a wild state completely, as it cannot be domesticated.

Mining in Peru has already been touched upon. The enormous gold-bearing deposits on the summit and slopes of the Peruvian and Bolivian Andes, contain probably as much gold as was contained in California and Oregon, but whether it lends itself equally to recovery remains to be seen. These deposits are glacial, tertiary, and alluvial, and the result of the natural draining of lake-depressions. Whole areas of pampa are impregnated with gold, and moraines miles in length carry gold in apparently paying quantities, as already described; and both "monitors" and dredges are employed in gold recovery. Water in abundance is the prime adjunct of their operations, however, and upon the very water-parting of the Cordillera this offers difficulties. Alluvial gold is mainly found in the districts of Sandia and Carabaya, of which Poto, San Juan, Aporoma and others are examples: and upon the upper Marañon, east of Huaraz, and other affluents of the Amazon. Gold in the form of ore is generally associated with other metals, largely as ferruginous quartz. Among the principal districts where such ores abound are: on the uplands and eastern slope: Pataz, Huanuco, Chuquitambo, Huancavelica, Cuzco, Cotabamba, Aymares, Paucatambo, Santo Domingo, etc.; and on the Pacific slope: Salpo, Otuzco, Huaylas, Yungay, Ocros, Cañete, Ica, Nazca, Andaray, Arequipa, etc. A very few of these districts show profitable or any working of gold mines at present, although doubtless they will attract attention in the future. The broken nature of the country, whilst offering difficulties of transport, has certain compensations in the water-power in the ravines, and in the possibilities of adit-mining; the lodes often crossing the hills, with their outcrop ascending thousands of feet above the floor of the ravines. Lodes are often miles in length; and 3 feet to 8 feet in width, carrying from 1 oz. to 5 oz. of gold per ton, often in conjunction with pyrites. In many cases the

oxidised ores at the surface have been extensively worked in primitive manner by native miners—generally a proof of value—and the ores crushed and treated with quicksilver in stone mills at the stream bed. Thousands of such workings exist. In Peru are some enormous mineral lodes: among the largest in the world. Copper and coal are both exceedingly important in Peru, and offer considerable field for industrial effort. The rapid advance of Peru as a copper-producing country is shewn by the increase in the output of the metal, mainly from the great Cerro de Pasco mines. Quicksilver has been a famous product, both at Huancavelica and Chonta, near Huallanca; the latter place being an important mineral centre not far from Huaraz. The coal and copper bearing districts, which lie in that part of Peru, extend over a considerable zone, but copper exists in the south also. Lead is plentiful, generally in conjunction with silver, and numerous small native *oficinas* or lixiviation establishments exist for the treatment of ores; as well as several modern smelting works; notably those of Casapalca and Cerro de Pasco. Silver ores are often extremely rich, and great fortunes have been made by Peruvian mine owners, and even by poor miners. They occur mainly as oxides and sulphides. Typical districts are those of Huaylas, Yauli, Quespesisa, Santa Ynes, Caylloma, etc. Zinc is also plentiful. The coal is of various kinds, both anthracite and bituminous, and often occurs in enormous tilted or vertical strata, exposed at the outcrop, and capable of mining by adits. Enormous visible quantities of coal exist; hundreds of millions of tons in certain districts. On the coast, as at Paracas and near Trujillo there are deposits upon which some prospect work has been done, close to tide water. Petroleum is found in two fields: that near Tumbez, and at Talara and Zorritos; and that of Titicaca, in the Department of Puno, and is of considerable importance. The rarer metals of wolfram, molybdenite, bismuth, cobalt, nickel, etc., abound, and many other minerals of commercial value. Nitrate has been found at Caraveli.

The mining laws of Peru are by no means onerous, and

everything is done to attract capital to the industry: but the methods of native mine-owners in negotiation often leave much to be desired. The mining tax is 30 dollars per hectare: equal to £3 per 2½ acres. Labour is moderately plentiful in certain districts, and earns a low rate of wage, from 1s. to 3s. per day; but contract work is generally preferred by the native miner, who must be regarded as a tolerably good worker. Mining is not much affected by political disturbance, and tenure is secure, as long as the tax is paid. The government has made a detailed investigation of the mineral resources of the republic, carried out by the students and graduates of the national mining school.

The means of communication and transport in the Andean countries have been created under great expense and against formidable natural obstacles. The railways on the western side of South America consist mainly in isolated lines proper to each republic. They are, however, growing now into a general system. In Peru the Oroya line, starting at Callao, passes through Lima and ascends the western slope of the Andes to an altitude of 15,660 feet, with a length of 128 miles from tide-water to terminus. It throws out a branch line northwardly to Cerro de Pasco, the important mining centre, about 130 miles long; and a branch southwards to Huancayo, about 60 miles long, designed ultimately to reach other towns of the highlands and ultimately to join at Cuzco, with the southern railway from Arequipa and La Paz, which ascends from the coast at Mollendo. The Oroya railway ascends the valley of the Rimac, gaining its great elevation by a series of switchbacks, and at its highest point crosses the perpetual snow-line. The line was an exceedingly costly piece of work, and can never pay interest upon its original capital; which was rendered additionally large by fraudulent financial methods at the time of its inception: and in addition the cost of upkeep is very heavy. The Oroya line is perhaps the most audacious piece of railway engineering in the world, and credit therefore must be given to its North American constructors. It is remarkable as a scenic line, and is one of the chief matters of interest in Peru. The line is now under construction eastwardly to the head

of steam navigation on the Ucayali river, which will give an outlet to the fluvial system of the Amazon, and be of incalculable importance to Peru.

The Southern Railway of Peru, ascending from the coast at Mollendo, serves Arequipa, and crossing the Cordillera at 14,660 feet elevation enters the great Titicaca basin: and extends northwardly to Cuzco. A steamer line upon the lake reaches La Paz, the capital of Bolivia, in the south. The southern railway of Peru has a total length of about 450 miles, or with the Bolivian portion 711 miles: and it is a remarkable piece of engineering work, second only to the Oroya line.

From Lima northwardly along the coast a line of railway is being pushed slowly; and a southern coast-line is also projected, towards Pisco and Ica. There are various short lines running from coast ports across the flattish littoral, but these, as before stated, all terminate at the foot of the Andes, to cross which is at present beyond the economic resources of the country. All the principal railways of Peru are controlled and, in general, efficiently operated by a British controlled company, known as the Peruvian Corporation.

The position of the Peruvian Corporation in 1911–12 was shewn by the report of that company, which states that after provision of 7 per cent. for amortisation and interest on the debenture issues of £5,400,000, the net revenue account, including £57,500 brought forward, shewed a balance of £410,700. The total revenue, including the government's guarantee payment, guano profits, etc., amounted to £647,000. For the year 1919–20 the income was nearly £600,000, but for 1921 this was reduced by a sixth, due partly to non-payment of the Peruvian government annuity. Guano shipments yielded £36,000. The enormous interests controlled by this company and the wide field covered are greatly influenced by the growth and condition of Peru, and the prosperity of the enterprise and the republic are much bound up in each other. The capital of the Peruvian Corporation, in debentures and shares, reaches nearly £22,000,000, held in many hands, both European and North American. Proposals were recently made to hand over the possession

of the railways—which are held under a long lease—permanently to the corporation, but this was opposed, by the senate, and wisely, the disinterested economist may consider.

The aggregate length of the railways in Peru is about 1,500 miles, a small mileage for so vast an extent of territory as the republic possesses.

Of foreigners in Peru there are few, in comparison with Brazil and Argentina. There are no colonies, with the exception of the small German settlement of Pozuzo, and the British of the Perené, both in the Montaña, existing under difficult conditions. There is no considerable flow of immigration into Peru so far, notwithstanding the vast importance to the country of a supply of foreign labour, capital, ideas, and energy. This necessity is fully recognised by Peruvian statesmen, but conditions have not proved sufficiently favourable for the emigrant, or have not been brought to his notice. It cannot be said that there is a field for the foreign settler without means. On the coast lands irrigation works are necessary before agriculture can flourish ; and all the good lands capable of such are under ownership, except those that require large capital for such hydraulic works. The British are mainly represented in Peru by the agents of the large trading houses, sugar plantations and cotton mills, steamer lines, cable company, mines, bank and other commercial and industrial enterprises : and the total British community is a small, although important, one. German interests—especially banking—tend to increase. Americans own and operate the great Cerro de Pasco mines, and are engaged upon various railway works and projects : and have a good deal of money invested therein. Italians, French, and Spaniards have many good shops—articles of clothing, groceries and merchandise. The Italian colony is the most numerous of any : and Italians are met with throughout the republic, generally engaged in smaller branches of commerce. Foreigners are greatly welcomed : and British and American gold greatly sought by mine-owners in the interior. To take up mining claims and sell to a foreign syndicate is often an ambition of the people of the interior.

The manufacturing industries of Peru are limited in number, and are concerned mainly with the treatment of agricultural material and mineral products. They are distributed throughout the republic, and include the making of sugar and rum, textile fabrics from cotton and wool, as elsewhere described, wines and spirits from grapes, chocolate from cacao, cigars and cigarettes, and the smelting of ores. The Santa Catalina factory at Lima produces cloth, blankets, and underclothing; and is an institution of considerable local importance. There are cotton factories also at Lima, Ica, and Arequipa: and large woollen factories at Lima and Cuzco. The manufacture of counterfeit spirits and liqueurs at Lima and Callao is carried on, but ought to be suppressed. There are good breweries at Lima Callao, Cuzco, and Arequipa, and the consumption of beer tends to increase. The making of "Panama" hats from the fine toquilla fibre, and the weaving of mats and ponchos is an excellent industry of the natives of the interior, inherited from Inca times. There can be no doubt that the future will shew an increase of miscellaneous manufacture in Peru, with foreign capital: and there is already a call for many branches of small manufacture, in which capital can be well employed.

The financial record of Peru presents a picture as chequered almost as its physical character. Notwithstanding the enormous natural resources of the country, this record has been, until very recent years one of disaster and discredit. Peru was once described as a "beggar sitting upon a mountain of gold," and the description is still applicable, if to a less extent. The internal strife which followed independence prevented the development of the natural wealth of the land. Later, the export of guano and nitrate—a too easily gotten source of wealth—supplied the national treasury with overflowing funds. These were squandered in corrupt practises, nepotism, and in extravagant enterprises, which brought in their train loss and confiscation, bankruptcy, and the surrender of the principal sources of revenue to foreign creditors, in satisfaction of the obligations entered into by the republic's often incompetent rulers and economists.

The history of the numerous loans and conversion of loans contracted abroad is one of the most remarkable of any country, and in 1875 the enormous total of £49,000,000 represented the foreign indebtedness of the nation, upon which the annual interest of £2,500,000 was beyond the power of the exchequer. In 1876 the payment of the interest was suspended, with disasterous results to the national credit. In the war of 1879-1882 the principal source of income: the guano and nitrate deposits: were taken by Chile. In 1889 the foreign debt with arrear of interest had amounted to £54,000,000, and relief was only secured at length by a contract entered into with the foreign enterprise known as the Peruvian Corporation, a contract which took the burden from Peru, and had the effect of turning a threatened heavy loss to the foreign bondholders into a profit.

Peru exhibits a steady if small growth as regards revenue and commerce. The revenue in 1910 was £2,800,000, and the expenditure £2,655,000, and in 1911 £3,227,000 and £2,833,000, respectively. In 1902 the exports were of a value of £3,704,000 and imports £3,428,000: whilst in 1911 they had grown to £7,422,000 and £6,371,000. In 1919 they were respectively £P26,900,000 and £P12,200,000.

At the close of 1912, Peru experienced a change of government and a new president was elected, or rather appointed by congress due to electioneering disturbances and illegalities. The retiring president went out with a shower of stones and curses, and an attempt at lynching, notwithstanding that he had done well by the country; and the incoming president was received with a shower of flowers and laudatory enthusiasm. Such, however, is often the lot of the public man in Latin America. At least, no political murders were committed, such as have too often marked the history of the republic. The ejected president was re-elected for the present period (1922). The port of Callao has suffered of late from serious strikes for better pay and shorter hours.

The future of Peru depends upon the stability of its government, the better education and protection of its lower classes, and the more rapid development of the resources

and great land areas of the republic, coupled with a reasonable flow of immigration. Above all stands the necessity for more fostering care of the working classes, especially the Cholos and agricultural and mining classes of the uplands, and the Indian of the forests. These people, if they continue to deteriorate or are destroyed, cannot be replaced. A country will not develop or prosper which retains or monopolises in the hands of a small upper class the wealth and education of the country. The growth of Peruvian democracy is not an impossible condition. Both in her soil and in the character of her people Peru contains valuable elements, which it is now time should begin to progress. Something has been done, but much remains to be done. Peru is one of the most interesting countries of South America, and worthy of a fuller life than that it has lived in the past. Historically and topographically its attractions are many, and it should command the sympathy of other nations.

CHAPTER VII

THE INCAS OF PERU

A heritage of the republics of Peru, Bolivia, and Ecuador, no subject is of greater interest in its particular field than that of the ancient civilisation of the Incas. It has fascinated many students and readers, and the remains of the buildings and other structures, left by these remarkable people and their predecessors and contemporaries, are of strongest attraction to the traveller in western South America. Isolated upon the vast, elevated tablelands and among the profound valleys of the Andes, shut in by high mountain ranges on every hand, and cut off from the rest of mankind until four centuries ago, flourished a great empire, far advanced in arts, agriculture, and political economy: of whose civilisation it may be said that it was superior in many respects to that which has replaced it. The story of the Incas and their fall is one of the greatest romances in the world's literature, wherein it might be said that truth has been stranger than fiction.*

It was in the elevated and inaccessible territory of Bolivia, Peru, and Ecuador that the empire of the Incas and their predecessors arose and flourished. The Inca regimen extended from what is now Chile, to the north throughout Peru and Bolivia, into Ecuador, a tract of territory 1,200 miles long, and from the Pacific ocean on the west to beyond the eastern verge of the Andean tablelands and slopes; its influence, though feebly, reaching as far as the Gran Chaco in Argentina. The remains of the Inca and pre-Inca works are represented by massive stone temples, fortresses and

* The origin and civilisation of the Incas is discussed and the buildings illustrated in the author's book, "The Secret of the Pacific," T. Fisher Unwin, London, 1912.

palaces, roads, bridges, aqueducts, and tombs, scattered over this vast region, surrounded by innumerable ruined dwelling-places and one-time cultivated terraces. Beautiful objects of pottery, gold, and textile fabrics have been preserved, or recovered from tombs, shewing the clever handicraft of the people.

The problems of the origin and growth of the early Peruvian civilisation is one which has been much discussed. On the one hand it is considered to bear evidences of possible derivation from Asia and Egypt, in very early times; and on the other to be entirely self-derived: the natural reaction of man to his environment in America. Much controversy has been waged on this point, and at present the respective theories seem to be about equally balanced. Those who support the exotic or imported theory point to Bering Strait as the possible route of entry from Asia into America, whence a migration along the Pacific coast might have followed. The possible arrival of junks from Asia, which it has been shewn have many times drifted over to the North or South American shores, is adduced as a further source of influence. Another theory points to the supposed one-time existence of a submerged Pacific continent, of which Easter Island and its archæological remains might be a remnant; or of an origin in the "lost continent" of Atlantis, upon whose gradual destruction a part of the population supposedly went eastwards and formed the cradle of civilisation of Egypt and Mesopotamia; and a part westwards to found the culture of the early Mexicans and Peruvians; of which the Toltecs, Mayas, Aztecs, Incas and pre-Incas were the descendants. This, however, cannot be regarded as more than a mere idea at present, and the question loses itself in the mists of fable and imagination. As regards the autochthonous or self-derived theory, it is reasonable to suppose that as man came to being and evolved a culture in one part of the world, as in Egypt or Chaldea, he may have done so equally in another, as in Mexico and Peru, and here at present the matter rests; although it is likely to receive active consideration as time goes on.

But whatever may be the real truth of these theories

concerning the early Peruvians, the fact is established that, upon the coast and highlands of western South America, a civilisation and temple-building art, and scientific agricultural system, must have been in course of evolution contemporaneously with those of the Egyptians and the Assyrians ; for if it be assumed that the early Mexican and Peruvian arts were autochthonous, their development could scarcely have occupied a less period than those of Egypt and Asia. The system of social laws, which it is a matter of authentic history the Incas enjoyed, were those of a highly organised commonwealth under an autocratic but beneficent monarchical regimen ; and the system of land-holding, the disposal of the natural and national resources of the empire, and the just and humane administration of imperial and local affairs were such as have never been surpassed. Peru and Mexico may have been partly civilised when the early Britons were in a primitive condition, and had the Incas of Peru, or the Aztecs and Mayas of Mexico, developed a ship-building, as they did a temple-building art and law-giving faculty, they might conceivably have set sail and discovered the old World before Colombus discovered the New.

The Inca Empire flourished, as far as can be ascertained, from the time of the first Inca, Manco Capac, who founded the dynasty at the beginning of the eleventh century of our era, to the time of the arrival of Pizarro and the overthrow of Atahualpa, in 1532. But the Incas were not the first civilised people of Peru. They were preceded by, and probably inherited their civilisation from, the Aymares, whom they possibly overthrew. The various mural remains throughout the country are, therefore, of different people and periods—some only nine to five hundred years old, others being of much more remote epochs, measured possibly by thousands of years.

The empire of the Incas, at the time of the conquest of Peru in 1532, had as its main centres Cuzco and Quito, the capital of Ecuador, upon the equator ; and these centres were connected by the famous Inca roads, which some historians—generally those who have not seen them—have described as equal to the roads of the Romans, which state-

ment is far from being true. They were, however, means of communication of the utmost value to the empire, and although nothing more than trails for the llamas, the camels of the Andes, which were the only beasts of burden known to the people, they gave access from place to place, and were traversed by the system of posts and postmen maintained by the Inca government. These roads were more than 1,100 miles long. As engineering structures the roads were of some merit, crossing by rock-hewn steps the summits of the Andes above the perpetual snow-line, passing swampy lands by stone causeways, and rivers by means of the remarkable suspension bridges made of woven grass or osiers, and by stone structures. There were two main roads; one along the high plateaux and summits of the Andes; the other upon the lowlands of the coast. The principal groups of buildings are in some cases disposed along the line of these roads, or are adjacent thereto, portions of the roads only remaining here and there. The ruins of most notable occurrence are situated in the neighbourhood of Cuzco, and upon the region bordering upon the great Lake Titicaca. Cuzco is about 200 miles from the lake, and was the great Mecca of the people and the seat of government. Overlooking the city is what is perhaps the most remarkable pre-historic building in the New World; the fortress of Sacsaihuaman, consisting in a series of four or more great walls, from 12 feet to 25 feet high, forming terraces up the hillside 1,800 feet long. The walls are built as great revetments, with twenty salients at regular intervals, the masonry being formed of Cyclopean worked stones, which in some cases are nearly 20 feet high, weighing many tons. The walls of this fortress, as well as those of others of the Inca buildings, shew the character of the masonry, in which the stones are generally polygonal. In some cases the stones are cut out to fit each other in a way such as must have involved much labour. Possibly this was meant as a species of wall bond, to resist earthquake shocks, as in old Japanese walls. Notwithstanding this diversity of surface, the contact between the stones is sometimes so perfect that a knife-blade cannot be inserted; and there is no mortar. Whatever

may have been the reason for this lack of uniformity in the Inca masonry, it is curious, and the walls have well resisted the ravages of time and the elements. In the streets of Cuzco some well-preserved examples of Inca walls form part of modern buildings, a good example being the wall which was the base of the Palace of Huayna Capac, one of the later Inca emperors. Here massive stones are encountered, polygonal in form, fitting perfectly into each other; one of them is twelve-sided. This wall forms part of an Inca street, which is used to-day. In the city of Cuzco there are other buildings, notably the remains of what was the Temple of the Sun. Overlooking the valley are the singular steps or terraces, cut out of the living rock, which is termed "the seat of the Inca," and it is stated that the Inca emperor took his seat here to watch the construction of the great fortress. Upon the slope of the Yucay valley, which is one of those which drain into the affluents of the Amazon, the ruins of another remarkable fortress are encountered, that of Ollantaytambo: which also consists in great terraces of Cyclopean masonry. There are to be observed in this structure—a common feature of Inca architecture—the series of niches in the walls, with their characteristic trapezoidal form, giving a unique effect. No style of building could accord so well with its environment as the massive structures of the Incas. Possibly the builders were influenced by the great mountains which overhang their valleys, and strove to adapt their work to the stupendous Andean architecture on every hand.

Another remarkable group of ruins in the same region is that of Intihuatana and Pisac. The latter is an imposing fortress upon the summit of the mountains, a remarkable situation with an extensive view of the surrounding cañons. The fortress of Pisac had its own sacred purpose. It enclosed—and still encloses—the temple wherein stands the famous astronomical stone or pillar of Intihuatana. This word means in the Quechua tongue "the seat or throne of the sun." The pillar was, in fact, the instrument by which the Inca astronomer-priests determined the solstices. The column, now broken, is worked out of the

Photo *Underwood & Underwood*

INCA WALL AT CUZCO, AND QUECHUA INDIAN

solid rock. It is enclosed by a circular tower, and in this the priests observed the shadow of the column upon an east and west line inscribed upon a circle which surrounded it. When the day approached feasts were celebrated, and a golden stool was placed upon the shaft, so that "Inti," the sun, might rest upon it, it is stated. There were others of these astronomical pillars throughout Peru and Ecuador, but they were generally destroyed by the Spanish priests after the conquest. The fortress and buildings surrounding the column-chamber are well executed—stone-built corridors, halls, and chambers; whilst the whole place, surrounded by beetling precipices and protected by revetments of granite masonry, is impregnable. These great fortresses commanded the valleys leading down to the region of the Amazonian forests below, and were doubtless to protect the empire from the incursions of the savage tribes dwelling there.

Tiahuanaco lies near the southern end of lake Titicaca, and contains the ruins of the oldest city in the New World, upon this high, sterile plateau more than two miles vertically above the level of the sea. The ruins of Tiahuanaco consist mainly in the outline of a great temple, shown by rows of upright monoliths, foundations, parts of stairways, a great stone doorway, and some colossal stone figures. It has been a question how these great monoliths were transported here, but taking into account the hydrographic conditions of the site, which might have been formerly an island when lake Titicaca was more extensive than even now, it is conceivable that they were floated to the spot, from the trachyte and basalt deposits—which materials were used in part—40 miles away. But, on the other hand, some of these monoliths, both here and at Cuzco, have been transported for great distances over the most broken country imaginable, and their carriage presents the same question as has been aroused concerning the monoliths of Egypt. The most notable object is the monolithic doorway of Akapana, with its carved figures, the central one of which has been taken by Peruvian archæologists to represent the mystic deity Huirakocha. Upon the islands of lake Titicaca there are other notable ruins, both

Inca and pre-Inca. From this island it was that Manco Capac, the first Inca, whose "virgin birth as a redeemer of man" is part of the Inca mythology, set out to civilise the savage tribes of the Andes. There are ruined temples to the sun and the moon, the former of which the Inca worshipped as symbolical of a greater Deity. There was much that was chaste in the religion of the Incas. They imagined a Supreme Being, an "Unknown God," who pervaded everything, but who could have no visible or tangible form or likeness; and they did not set up idols, nor were human sacrifices performed. The image of the Creator was represented at Cuzco by an elliptical plate of gold set on the wall of the temple.

Some 700 miles—or about 400 from Cuzco to the north—is the region of the Upper Marañon river, where other examples of the Inca and pre-Inca stone-shaping are encountered. The modern capital of this region is the town of Huaraz, and across the main range of the Cordillera is an old Inca pass of rock-hewn steps at an elevation of nearly 15,000 feet, which gives access below to an affluent of the Marañon, upon which is situated the remarkable castle of Chavin. This castle contains some singular underground chambers and passages, the purpose of whose construction it is difficult to understand. The walls are of blocks of hewn stone, and carved monoliths, doubtless of pre-Inca origin, exist. One of these, a large carved stone, was transported over the Andes and down to Lima, on the coast, where it stands in the Exhibition Park. The remote region of the Upper Marañon is dotted with the ruined dwellings of the former occupiers of the land, sometimes in the most inaccessible positions, upon appalling crags, towards which the night-mists from the Marañon roll up in fleecy folds like a mysterious pall, and from them ruined castles and walls seem to start suddenly like the ghosts of the dwellings of a vanished race—which indeed they are. The disposal of these numerous ruins, often about a central fortress commanding the heads of valleys, and surrounded by the abandoned "andenes" or terraced fields of these people, show that the inhabitants lived as clans, or "Gentiles," and

their ruined dwellings are termed by the Indians of the Andes to-day "casas de los Gentiles," or "houses of the Gentiles." The one-time cultivated terraces are a striking feature of the Andes.

The most notable group of ruins in this region is that of Huanuco Viejo, which stands upon a broad, flat plain upon an arm of the Marañon, at an elevation of about 12,000 feet above sea level, and consists in an extensive palace, a fortress or temple of the sun, baths, and an extensive village of streets, with a series of round and square dwellings, alternating, in long rows. The chief architectural feature of the buildings is a series of six stone doorways, fine examples of Inca masonry, and the castle or temple. The doorways and niches are of typical Inca tapering or trapezoidal form, with quoins and lintels of well-fitted stones of more or less irregular form, so closely fitting that a knife-blade cannot be inserted in the joints. The castle, which stands in the centre of what was a huge square, around which the palace or palaces are disposed, is a building of different character. It is rectangular in form, about 100 feet wide and 170 feet long, very solidly constructed of cut stone blocks surmounted by a moulded cornice.

The principal ruins of the Incas, pre-Incas, and other semi-civilised former occupants of the coast, such as the Chimus of Chan Chan, are mainly of buildings constructed of adobe, and have remained—where they have remained at all—due to the dry climatic conditions as before mentioned. The most famous of these ruins formerly was that of Pachacamac, which at the time of the Conquest was a fine temple. The name "Pachacamac" signifies in Quechua—the language of the Andean people—"He who gives animation to the Universe." To-day nothing remains of this great temple but a mound of rubbish, a day's ride from Lima. Upon the coast-zone to the south are a group of ruins known as "Incahuasi" or "the house of the Inca." These, unlike the coast ruins generally, are of stone, although they lack the fine workmanship of the upland structures. But they are unique in that they contain a row of columns; an architectural feature unknown in the Inca and pre-Inca ruins

elsewhere, for, except in this case, the column was unfamiliar to the Andean people, as was the arch.

The Inca and pre-Inca architecture differ much. The first lack any iconographic carvings, such as are seen at Tiahuanaco and Chavin. Monoliths of considerable size were common to both ; one of those at Cuzco is 27 feet long, 15 feet wide, and 12 feet long, and there are others of almost equal size. The stones vary as to their geological composition according to the region ; some are of granite, as at Cuzco, some of trachyte, sandstone, or basalt, whilst others are of a hard, siliceous limestone. It is to be recollected that this remarkable stone-shaping art was performed without the use of iron ; but the Incas possessed bronze, termed *chumpe*, and copper tools. Indeed, they were skilled metallurgists in copper, gold, and silver. In general terms the principal characteristic of the Inca architecture is its great solidity. It would seem that the builders had desired to bequeath to posterity these chapters in stone of their history ; and, indeed, it is safe to say that these may be expected to outlast even the modern structures of America.

In regarding the Inca laws and social system, a broad general idea of their character may be obtained by remarking the statement of the Inca-Spanish historian Garcilaso de la Vega,* who stated that laws so beneficent had never been known under any monarch in any part of the world. The most important laws were those relating to the land and the enjoyment of the natural and national resources, the payment of taxes, and the attitude of the individual and the government towards the community. The whole territory of the empire, which throughout the Inca dynasties was constantly added to by the subjugation of neighbouring tribes, was carefully surveyed and measured. It was then divided into three parts, one for the Sun, one for the Inca, and one for the people. The revenues or values of the first were for religious purposes, temple-building and maintenance of the priests. The second division provided revenue for the royal

* The best account of these matters is found in the Hakluyt Society's translations of "The Royal Commentaries of the Incas" (Markham's translation). *See* also the Author's book, "The Secret of the Pacific" (London: Unwin, 1912).

household, and machinery and officers of government. The third and most important was the land assigned to the people. Under the agrarian law the lands in the neighbourhood of each village were carefully measured with cords and marked out in lots called *tupus*, and a *tupu* was allotted to each inhabitant. The size of the lot was that upon which a certain measure of maize—about a hundredweight—being planted would provide sustenance for one married peasant without children. Directly children were born another lot was added for each boy and half a lot for each girl. The boy's lot was made over to him when he married, and every man was obliged to marry at the age of twenty-five. It was unlawful for the father to retain it. The daughter's lot, however, remained with the father when she married, for it was not regarded as a dowry, and was not necessary to the well-being of her family, in view of the fact that the husband would have received his lot from the state. The people were not the owners of these holdings. The allotments were made or re-made at the end of each year. It was a species of lease from the state, and the holder could neither dispose of his own holding nor acquire that of others. If the father did not need his daughter's half lot it reverted to the state, and when the father died his land also reverted to the state. Land could not be bought and sold. It was not a merchantable commodity.

It might be objected that so comparatively short a tenure would be inimical to anything in the nature of attachment to the soil, but in practice it was not so, as there was generally nothing to prevent the same holder continuing his occupancy, and the yearly tenancy practically constituted for him a life proprietorship. To this condition the native love of the soil and dislike of change, which marked the character of the people, gave added strength. In the cultivation of the lands a regular order was employed. The lands of the Sun were first tilled, the whole population taking part in the work. Next were cultivated the lands belonging to those who were unable to till their own, performed under what was known as the "fraternal law," which obliged the inhabitants of

every village to assist each other; thus the holdings of the only persons who were permitted to be classed as "poor," such as widows, orphans, aged, and invalid, were ploughed, sown, and reaped by the community. Special officers were deputed to direct this work in each village. The evening before this duty was to be performed these deputies ascended into towers built for the purpose, and blowing through a shell or trumpet, summoned the people and allocated the work. The holdings of men who were serving as soldiers were, like those of widows and orphans, also cultivated; and the wives of soldiers were regarded as widows during their husbands' absence. The children of soldiers who fell in the wars were taken great care of and provided for.

After the neighbourly duties had been performed, the inhabitants worked their own lands, and in this neighbours assisted each other as might be necessary. Then the lands of the curacas, or village chiefs, were tilled, and such was the spirit of neighbourly law enforced that these were the last to receive attention. No favouritism, corruption, or "graft" of any nature was permitted. As an example of this law it is related that a government superintendent, in the time of one of the later Inca emperors, was executed because he caused the land belonging to one of the curacas to be attended to before that of a poor widow who ought to have had precedence. Gallows were set up on the curaca's holding, and the unjust official hanged therefrom. The last division of lands to be cultivated, following on the law of the precedence of the most humble, was that of the king, or Inca. As in the case of the lands of the Sun these were tilled by the people in common, amid scenes of rejoicing. In the same way that land monopoly was made illegal and impossible, so was it equally prohibited to monopolise or misuse the other natural resources of the country. The most important of these natural resources were water for irrigation, guano for fertilising, and gold, silver, and other products of mines. All these were regarded as national or state property. It is to be recollected that the conditions under which agriculture was carried on in early Peru were not easy. Peru lies in the torrid zone, and

the topography and climate of the country are very peculiar. For the successful cultivation of maize and cotton irrigation is necessary. The Incas were extremely clever in the art of irrigation, constructing long canals along the slopes of the hills, damming up lakes and constructing hydraulic works of much ingenuity. Water was of great value, as without irrigation the maize crop would fail. The pasture lands, in some cases, where the herds of llamas thrived, also required irrigation in dry seasons. Neither expense nor trouble was spared in the irrigation works. In some instances channels of many miles in length were made in order to irrigate very small patches of maize-producing ground. Many of the old channels are visible to-day. No monopoly of water was permitted, nor private ownership. The quantity was measured, and calculation made as to the amount required for the irrigation of the soil in each village. Accordingly each cultivator was allotted a time-flow of water from the irrigation channel sufficient for his land. No preference was given; each received water in his turn, neither the rich nor the poor receiving any preference.

It is seen that the system of farming was that of an intensive cultivation in small holdings. But it was not a question, in the mountainous regions, merely of subdividing the land, but positively of making the land. That is to say, the interior of the country is so broken and steep that it was necessary to terrace the mountain slopes in order to contain the soil. The result was that every hill offering the barest possibilities of soil was converted into terraced fields, by the method of banking up on the lower side with stone walls and excavating on the upper, and filling in with soil; the whole presenting the appearance of huge flights of steps. The slopes of the Andes are covered with these abandoned terraces or "andenes" in many districts, where, before the Spanish advent, a large self-sustaining population flourished. In such districts every available foot of ground has been used; the terraces reaching up in series from the stream bed into the very clouds, stopping only where the rock-face of the hill became vertical. Many of the terraced holdings appear almost inaccessible, except to condors and

vicuñas. They testify to the remarkable industry and ingenuity of these people, and it is a melancholy condition to see them lying abandoned. Many of these "andenes" are still used, however, and the inevitable irrigation ditch surmounts them, its influence marking a well-defined line of vegetation on the barren mountain slope.

Next in order to the system of land tenure and agriculture may be considered the system of tax-payments. A fundamental law concerning this was that taxes were paid in labour and produce, and not in money: and paid in such produce as the particular region in which the taxpayer lived afforded. Tribute, moreover, was only taken in respect of the capabilities of the land. The first and principal tribute was in the form of labour in cultivating and harvesting the lands of the Inca and the Sun. The proceeds from this labour were stored in great storehouses in each village. Great granaries were built and the grain stored therein, and after the wants of the Inca and the priests had been supplied these were held as surplus stores against times of famine, and for maintaining the large armies that were constantly kept in the field, and for other state purposes, as well as for furnishing the poor with seed and food when necessary. This was equivalent to a system of national grain reserves against war or famine. Taxes were also paid in the form of manufactured products: shoes, arms, clothes for soldiers; and in food products, all of which were stored in the warehouses or national and royal depots, which existed in every valley. It was held as a great economic error to exact from any inhabitant anything in the form of taxes which he could not personally produce. A man with a large family was considered wealthy, because its labour, in a few hours, provided the necessary tax; whilst the added allotments and extra labour to work them insured a large return for the family.

The work of administration of all these laws, and inspection of the people and enforcement of their obligations, called for a great army of higher and petty officials and inspectors; in effect a benevolent bureaucracy, which was supported by the state. Minute accounts of everything

were kept, whether of the amount of land and inhabitants, births and deaths and other vital statistics, whether of the quantities and kinds of goods delivered into the national and royal storehouses. Everything was overlooked and supervised. The houses of the people were regularly inspected to see that the man and his wife performed their duties, that discipline was maintained among the children, and that household utensils and clothing were kept clean and in order. The people were even obliged to dine and sup with open doors, in order that they might be inspected with facility. All were obliged to marry, or give sufficient reasons therefor; and in journeying to wear the distinctive dress of their district. Other laws provided that strangers and travellers should be treated as guests, and special houses or *tambos* were provided for this purpose. It was also provided that the poor should regularly be invited to public banquets, so that they might forget their condition; and all neighbours were commanded to feast together once a month to promote neighbourly intercourse.

As regards the manufacturing industries, if such they may be termed, these were not carried out in factories, for every boy was taught the rudiments of handicrafts, and every inhabitant was able to supply his own wants. Clothes, shoes, arms, and everything else were made at home. Each man, assisted by his wife, was tailor, shoe-maker, weaver. The wool of the llamas was wrought into homespun, and even to-day the people of the Andean uplands make the most excellent tweeds and homespuns, in check and stripe patterns, as well as blankets, *ponchos*, and other woven fabrics. Some of these are of extreme elegance and utility. The colours they used for dyeing are of much beauty. These cottage industries are being ousted to some extent by the work of the commercial traveller from Europe, and cheap German dyes and machine-made Lancashire cotton goods and woollens are replacing the excellent cottage handiwork of the people. But the inhabitant of these uplands holds fast to the customs of his forbears, and refuses to be herded together, or to abandon his free, out of door life, and small holding. The natives were

and still are hard-working and patient, and evince considerable dexterity in their crafts.

Mining was carried on for the recovery of gold, silver, and copper, but the noble metals were not used commercially or as currency. They were employed in the decoration of temples, whose interiors were covered with plates of gold, and for the manufacture of vessels for the princes and nobility to drink from. Copper was used for tools, as the use of iron was unknown ; and it was more highly valued than gold and silver. Mining labour was performed by special artisans, who were supplied with food, clothing, house and tools by the state, and they were exempted from tax-paying. They worked only for two months of the year in the mines, being free then to attend to their farms. The custom still remains to some extent, and the miner of the Peruvian and Bolivian highlands often prefers to throw down his tools at sowing and harvesting time and repair to his holding.

At first glance it might seem that the early Peruvians lived under what might appear to be almost an ideal social system. All their wants were supplied ; there was no such thing as poverty, destitution, or unemployment ; every man and woman was possessed of a piece of land, a house, and the conditions and material for their maintenance. The land, the means of production and distribution, and the natural resources of the country, were all nationalised, or what was in a sense equivalent to nationalisation. No one class was permitted to despoil another ; the strife between capital and labour did not exist, and the people were made honest and neighbourly by law. But the most serious defect that has been alleged against the Inca regimen is that individualism was stifled : that a dead level was maintained, and that progress was impossible. There is little incentive for progress when men and women are " labelled " and have no room for the exercise of free will in the matters of their daily life. It has been urged that this condition of " Socialism " was responsible for the easy downfall of the Inca empire upon the attack of the Spaniards. A people blindly obedient to an autocracy, however benevolent,

had lost, or never possessed, the power of initiative, nor energy to resist when attacked from the outside. On the contrary, it may be urged that they were good fighters and "imperialists" in their way, and that the horses and guns of the Spaniards gave these an undue advantage. Furthermore, the empire was in a state of civil war at the time of the conquest. Whether intellect and science would have advanced under the benevolent autocracy of the Incas, had they been undisturbed, it is impossible to say; but it is doubtful if "individualism" in some form would not have appeared. The advent of the European opened the door to individualism, science, and Christianity, however rudely. So far in South America the results, as regards the labouring classes, are slow; the poor inhabitants who once lived in peace and plenty under their old rulers now dwell in comparative misery, more or less exploited by the "capitalistic" system. They were abused and destroyed by the Spaniards, and to-day are both neglected and exploited. Modern methods have not yet benefited them. It is true that the republican governments of modern Peru and Bolivia seek to advance the status of the people of the uplands, although they can scarcely reach the lowlands of the Amazon: but their purpose and influence are feeble, and rendered at times almost fruitless by political strife, administrative corruption and defective organisation. The result of the work of the moderns in Peru, Bolivia, and Ecuador has been that a people who numbered perhaps ten or fifteen millions four centuries ago, and lived in sufficiency for unknown periods of time, now number little more than four millions, a great part of whom dwell in poverty and ignorance, regarding themselves as a conquered race, and almost without hope for the future. At the close of day the Indian ascends to some lonely hill in the vicinity of his habitation, with his flute or pan-pipes, and there makes mournful wail of protest upon his fallen state—notes which fall solemnly on the ear of the traveller in those remote wilds of the Andes.

CHAPTER VIII

THE REPUBLICS OF THE ANDES—ECUADOR

The republic of Ecuador is the smallest by far of the sisterhood of the Andean countries, but it shares with them the striking topographical features which distinguish the Pacific states of South America. The series of colossal snow-crowned volcanoes of this part of the continent, which overlook the equator-city and plateau of Quito, form the culminating orographical features of the Cordillera : the imposing mountain edifices which, built up of subterranean fires, have been sculptured by the perpetual snows which lie upon the Andes of the equator. Ecuador is a land of great contrasts. Above the profoundest gorges arise the loftiest summits : snowfields stretch gleaming above tropical forests, perpetual spring and perpetual winter lie one beneath the other, and bleak steppes alternate with smiling valleys.

The territorial conditions of Ecuador are to a certain extent similar to those of Peru ; comprising the Pacific littoral, the mountain and highlands zone, and the Amazon forest region. Due to a difference of climate, however, the coast zone is not arid and waterless, as in Peru and Chile, but is covered with dense vegetation. The portion of Ecuador extending into the Amazon valley does not reach the Brazilian frontier ; the northern extension of Peru intervening. The cis-Andean or littoral zone has a frontage upon the Pacific coast of about 400 miles, its principal topographical feature being the gulf of Guayaquil and the short navigable Guayas river leading to the port of Guayaquil. The climate of the coast lowlands is hot and moist ; and mangrove swamps line the shores of the Guayas

river. The gulf of Guayaquil, the only indentation of much importance in the western coast of South America, marks the line between the arid Peruvian littoral and the forested belt of the equatorial region. In the Spanish topographical nomenclature elsewhere described, the zones of varying altitude are known as the hot lands, the temperate lands, the cold lands, and the snowy lands; and the climatic conditions depending upon altitude are very strikingly marked in Ecuador, as much so as in Peru, and although the country lies upon the equator, from which it takes its name, the principal centres of civilisation and population are in the so-called cold lands of the inter-Andean region, which include the fertile plateau upon which Quito, the capital, is situated, nearly $1\frac{3}{4}$ miles above sea level. The tropical valleys and rivers of the Amazon watershed beyond are possessions of much value to the republic.

The republic is bounded on the north by Colombia, and on the south and east by Peru. Some of these boundaries are in dispute, and the area of the country, estimated at 116,000 square miles, is only approximate. Ecuador forms the westernmost part of South America; which continent, lying as it does almost entirely to the east of North America, brings Quito almost on the same meridian as Washington. The important island group of the Galapagos, lying 600 miles off the coast, upon the equator, forms part of the national territory. North of the gulf of Guayaquil the coast is of cliff-like formation, part of the great fracture-zone of the continent; and the great depths off the coast, and the vast heights of the Andes above, combine to form a great total difference of elevation: with tectonic earthquake-producing activity attendant. The strong contrast presented with the Peruvian and northern Chilean coast, in the matters of climate and vegetation, is due to the absence of the great Peruvian current, which is deflected outwards into the Pacific by the bulging northern coast of Peru, and so no longer influences the littoral. Due to this circumstance a total change in the character of the coast is observed. The sandy deserts of the Peruvian seaboard give place in Ecuador to forests coming down to the water's edge, bathed

in moisture and warmth, and extending upwards upon the slope of the country to an elevation of 4,000 feet ; primeval forests with trees of colossal size, and upon these wooded mountains at mid-day during certain seasons a veil of dark mist-clouds hangs. The climatic influences on the coast, however, are not rigid, but are varied by local conditions, and north of the gulf there are some arid desert areas.

The Guayas river at its mouth is nearly two miles wide, and the shores and islands are green with vegetation. Floating islands of matted trunks and palms float downwards on the turgid current, and upon these at times voyaging alligators are observed. Balsas, or rafts, canoes, and steamers ascend and descend the river, and the balsas return upon the flood tide, having discharged their merchandise. The river narrows considerably between Guayaquil and the mouth, and the ocean steamer almost brushes the vegetation on the banks, and temporary stranding on the soft mud shoals not infrequently occurs.

Above the tropical coast lands and lowlands the country slopes upwards rapidly, ascending to the high uplands, or *paramos*. The inter-Andean plateau, the region of the great uplands, lies between the two great chains of mountains which cross the country from north to south : known as the Eastern and Western Cordilleras respectively. The three principal plains,or shallow basins,are those of Quito, Ambato, and Cuenca ; the first having an average elevation of 9,500 feet, the second of 8,500 feet, and the third of 7,800 feet. The Quito plain is fertile, as described, and covered with vegetation, and the others barren ; partly due to the volcanic character of the region. Rising from the plateaux along the eastern and western margins are the main Cordillera summits, culminating far above the perpetual snow-line, which is found in Ecuador at about 15,750 feet above sea level. Nowhere among the mountains of the whole world does there exist so remarkable an assemblage of snow-covered peaks as those which exist around the Ecuadorian tableland. Not only for their height are these remarkable, but for their striking symmetrical disposition in two rows, sometimes in pairs facing each other across the valley.

Photo *Underwood & Underwood*

QUITO, ON THE EQUATOR

Around these central plains; almost within sight of each other, are grouped twenty-two such peaks, several of which are active volcanoes; the western chain containing the highest summits, the eastern the greatest number. Among the principal of these mountain peaks are Chimborazo, 20,498 feet elevation, Cotopaxi 19,613 feet, Antisana 19,335 feet, Cayambe 19,186 feet, with three others over 17,000, four over 16,000 feet, and four over 15,000 feet. It is stated that some of these peaks and towns, and places in their neighbourhood have sunk, and others risen, since the time of their first measurement.

The volcano Imbabura, notorious for its destructive eruptions of mud and water, stands between the two ranges towards the north of the plateau, reaching 15,033 feet; and its name was due to a now discredited native story that quantities of fish were discharged from the crater with the mud. Cotopaxi, the unrivalled, is the highest active volcano in the world, and smoke issues unceasingly from its summit. Another peak, Llanganati, bears the tradition that the treasures of the Incas were buried in a lake on its slopes. Tunguragua has a cone-shaped summit like that of Cotopaxi, and, rising direct from the lower elevation, is of the most imposing character. A cataract fed by the melting snows from its snow cap descends 1,500 feet in three leaps; and at its base lies a fertile cultivated valley, that of Baños, with thermal springs. Among the most impressive of these mountains is El Altar, or Capac Urcu, meaning "King mountain," with a summit formed of eight snow-clad peaks which tradition states were once higher than Chimborazo, but which sank under an eruption long ago. Sangay, another of the volcanoes, has been but little visited. It sends forth small outbursts of lava, throwing molten rock 2,000 feet above its summit, and the ashes are carried by the wind into the streets of Guayaquil, far away. On the western Cordillera is the magnificent Chimborazo, the name meaning "the mountain of snow," lying seventy-six miles north of Guayaquil, and forest-covered on the Pacific side to the snow-line, above which it rises for 5,000 feet. Mists and clouds cover the cone of Chimborazo, which is rarely seen.

Carahuairazo, or "Chimborazo's wife," so called by the natives, lies immediately north of her mighty consort, but at the end of the seventeenth century, during a great earthquake, her hollow cone collapsed, and left a jagged rim, weird and picturesque. Pichincha is the "boiling mountain," so named for its destructive eruptions which menace Quito, one of which in past centuries covered the city three feet deep with stones and ashes.

The hydrographic and river systems of Ecuador are those of the Pacific and Amazon watersheds. Of the former the Guayas river is the principal; but a considerable number of smaller streams flow westward through the Cordillera to the Pacific, some navigable and of considerable importance; among them the Mira and the Esmeraldas. The largest eastward-flowing river is the Napo, which rises near Cotopaxi. At the village of Napo it is 1,450 feet above sea level; at the confluence with the Aguarico 586 feet, and at its junction with the Marañon 385 feet, and nearly a mile wide. A large part of the region through which the river flows is claimed and occupied by Peru. The Napo is navigable for steamboats up to the mouth of the Coca river above the Aguarico, and in canoes up to the Cando cataract, 3,330 feet above sea level. Its total length is 920 miles. The Napo runs parallel with the now notorious Putumayo, whose possession is claimed both by Peru and Colombia. The Napo and its tributaries are famous as having formed the route by which Gonzalo and Orellana reached the Amazon in early Spanish times, the first white men to traverse those vast and difficult regions.

The remaining affluents of the Amazon flowing through this territory, of any importance, are the Tigre, Pastaza, Morona, and Santiago. The Tigre is 416 miles long, and navigable up to the Cunambo confluence; and it promises to become one of the best river routes of the region. The Pastaza is navigable for steamers of two to four feet draught for 124 miles at high water period, and for canoes for 200 miles beyond. It is, however, subject to furious floods. The Morona is navigable for more than 300 miles by small steamboats. Little is known of the affluents of these rivers,

but the navigability of the main streams is a condition of extreme economic value to the region they traverse, and provides an aggregate of navigable waterway of 1,500 miles. The Marañon, into which these rivers fall, is described in the chapter on the Amazon valley.

The Ecuadorian people are of the general Andean constituents, of white, more or less of pure Spanish descent, mestizos, and Indians; and the total population is estimated at 1,500,000 to 2,000,000, but no census of a reliable nature has ever been taken. As in Chile especially, the whites form an exclusive governing class, who to a large extent monopolise the land and arrogate to themselves all governmental powers. This class is estimated to number about 120,000 or 150,000; but it includes a certain proportion of mestizos. The mestizos in Ecuador number 300,000 to 500,000, and constitute about a quarter of the population. They are, as a class, backward, and in certain districts ignorant and slothful; but these conditions cannot altogether be ascribed as their fault. The system of land monopoly by the ruling class and the pride of European caste which these exhibit keep the people of mixed race under, and they have few opportunities of improving their condition, and the constant political turmoil tends to arbitrary methods. In the more remote districts the mestizos tend to revert to the Indian type. The Indians of Ecuador represent about two-thirds or more of the population, and are in the main the descendants of the ancient people under the Caras and the Incas. They were subjected to grave abuses under the Spaniards, thus sharing the grievous history of their brethren of Peru, and became much reduced in numbers at that period. Furthermore, the system of peonage, or debt-bondage, which controlled the natives under the colonial rule, and which was little better than slavery, practically exists at the present time, as regards the agricultural classes. Regarding their intellectual advance, the primary schools of Ecuador, like those of all Latin American countries, are free, but they are insufficient for the population, and education by the poorer classes is regarded with indifference; and only a small proportion of the people read and

write. The Indians of the Ecuadorian Oriente, or eastern region, are, like those of Peru, largely composed of tribes of *infieles*, or infidels ; that is, people who are under neither civil nor religious influence. The principal Indian tribes dwell on the headwaters of the Napo and other rivers, in some cases cultivate the soil, and have developed some primitive manufactures ; but in others they exist in a state of absolute savagery. These tribes are distinct from the Christianised Indians of the uplands, of whom the mestizo race has been formed, as in the case of Peru and Bolivia.

The negro element in Ecuador is principally confined to the coast, due to the warm moist climate in part, which the black race prefers. They are numbered at about 8,000, with 35,000 or more of Zambos, or people of mixed negro and Indian blood. Of Europeans and North Americans in Ecuador there are but few, numbered at about 1,000. A number of Chinese have settled in the coast lowland, more or less insidiously, as their entry into Ecuador is forbidden by law. They are engaged in shopkeeping mainly, but they do not obtain much foothold in the highlands. In certain places there is a strange admixture of Chinese, negroes, Spaniards and Indians.

The upper class Ecuadorians present characteristics similar to those of their neighbours of Peru, Bolivia and Colombia, to a large extent, except that they endeavour to preserve certain caste or colour distinctions to a greater degree. They are a people of excellent ideals and theories, hospitable and courteous, and in Quito draw certain vigorous characteristics from their bracing mountain environment ; but they are much influenced by political partisanship and ruthless in their methods when their antagonisms are aroused, like their brethren of Peru. The progress of the republic is often hampered by the turbulent political element; and the series of political murders which have marked its history have injured the country severely in foreign estimation.

Ecuador is divided into fifteen provinces and a territory, and the Galapagos islands, which latter are under the

administration of a *jefe* territorial appointed by the executive. These provinces are as follows:

Province.	Area.	Population.	Capital.	Population.
	Square miles.			
Carachi ...	1,495	4,000	Tulcan	5,000
Imbabura ...	2,416	68,000	Ibarra	5,000
Pichincha ...	6,219	205,000	Quito	80,000
Léon ...	2,595	109,600	Latacunga	12,000
Tunguragua ...	1,686	103,000	Ambato	8,000
Chimborazo ...	2,990	122,000	Riobamba	12,000
Bolivar ...	1,260	43,000	Guaranda	6,000
Canar ...	1,519	64,000	Azogues	4,000
Azuay ...	3,874	132,400	Cuenca	30,000
Loja ...	3,707	66,000	Loja	10,000
El Oro ...	2,340	32,600	Machala	3,200
Guayas ...	8,216	98,100	Guayaquil	60,000
Los Rios ...	2,296	32,800	Babahoyo	3,000
Manabi ...	7,893	64,100	Portoveijo	5,000
Esmeraldas ...	5,465	14,600	Esmeraldas	6,000
Oriente Territory	unknown			
Galapagos Is.	2,865	2,000		

The government is a centralised republic, whose constitution embodies the common Latin American system of Executive, Legislative, and Judicial control. The executive consists of a president, vice-president and cabinet of five ministers; the legislative of the congress of senators and deputies; and the judicial of a supreme court and five superior courts. Theory and practice have clashed greatly in Ecuador in the country's governance, and between 1830 and 1909 the constitution was changed no less than eleven times. The five ministers are of the departments of foreign relations and justice: interior, and public works: finance: war: public instruction, posts and telegraphs. The provinces are administered by governors, the departments by *jefe politicos*, and the muncipalities by *tenientes politicos* —political chiefs and lieutenants respectively, all appointed by the executive. The senate contains thirty-two members, two for each province, one-half being renewed each two years; and the chamber of deputies of forty-two members, one to each 30,000 inhabitants. Suffrage is restricted to literate male adults.

Educational conditions are backward in Ecuador. Education is compulsory and free as regards primary instruction,

but a considerable part of the population is unprovided for. In 1900 there were 1,300 primary schools and 80,000 children in attendance; 37 secondary schools and 4,500 pupils. For higher education there are the technical and professional schools and the three universities of Quito, Guayaquil, and Cuenca, and six schools of "trades and professions." The Quito university has a staff of thirty-two professors, with five faculties; and there is in the capital a school of agriculture, observatory, botanical garden, museum, military school, and at Guayaquil a naval school.

As regards religion Ecuador has always been a stronghold of the Romish church, and the constitution of 1884 enacts that all other creeds are excluded. The government at times has been practically a theocracy, but in 1904 reforms were made and the church placed under state control, which forbade the foundation of religious orders and changed other matters pertaining thereto, ensuring greater liberality.

The railway from Guayaquil to Quito now gives access to the plateau-interior, and is some 290 miles in length. It was built by American engineers with British capital. The total length of the railway lines in the republic is scarcely more than 800 miles; and the roads, with the exception of one of two highways built for vehicles on the coast, are only the ordinary difficult mule-tracks of the Andean countries. The general appearance of Guayaquil from the water is attractive. The harbour is a good one, two and a half miles in length, with extensive quays, and the town is a busy centre with factories, steam saw-mills, machine shops, and breweries, evidences of modern activity, in contrast with the mediæval Spanish cathedral and plaza. The city, which contains 80,000 inhabitants, stretches along the bank of the river for two miles towards a range of picturesque, wooded low hills, and the numerous craft lying before it, and at night the many lights, give the seaport a pleasing aspect on approaching it, which is not fully borne out upon entering. The streets are regular and wide, and the better parts of the town clean, but roughly paved and noisy: and in the poorer quarters are unpaved; and during the rainy season these streets become pools of stagnant water in which refuse

from the houses is thrown, forming breeding-grounds for mosquitoes, yellow fever, and malaria. Thus it is that the seaport of Guayaquil is notorious for its unsanitary conditions, which have always constituted a serious menace to ships calling there. During the years 1909-1912 more than 1,000 persons have been attacked by yellow fever in the town, and twice as many by plague: whilst smallpox and other epidemics were far more numerous. Vessels frequently neglect the port in their itinerary from Panama to Callao, as the enforced quarantine after leaving the place involves loss of time. The prevalence of disease is due mainly to the dirty and unsanitary mode of life of the poorer part of the population, their squalid vermin-infested habitations, and the neglected areas in the vicinity of the town, rather than to any irremediable climatic conditions. Following upon the improvements of Panama, however, the sanitation of the port has been greatly extended, with better conditions. Improvements had long been projected by the government and municipality, but indolence, lack of funds, and political disturbances prevented these from being carried out. Apart from these matters the town is an important place; its best streets are good, and in the many fine shops almost any article can be purchased. There is a modern electric tramway system in the town, and electric light, driven hydraulically from turbines; and power is also supplied to some of the sugar estates. Guayaquil is the principal distributing point for the whole republic.

The average daily temperature of Guayaquil is 76° F.; the highest monthly, in February and March, 77° throughout the 24 hours. The heaviest rainfall is in the same months, and was in 1911, 2,289 litres per square metre. There is no rain generally from May to November.

The other principal port of Ecuador is Esmeraldas, the name being derived from the old emerald mines in the vicinity; and there are various minor ports.

The terminus of the Guayaquil and Quito railway is at Duran, across the river, reached by the railway steamers. The Guayas river at this point is some three-quarters of a

mile wide, with a swift current and a tide with a fall of 12 feet. The line passes through lands cultivated with sugar cane, coffee, cacao, and bananas, and some rice, for which product the district offers great possibilities, and Guayaquil might become the most important rice-producing centre on the Pacific coast. There are a number of sugar mills, and the country in the vicinity of the line, before entering upon the ascent of the Andes, wears a more prosperous appearance. The railway enters the Chan-Chan valley, which is threaded by a roaring torrent, crossed and re-crossed by the line, and the heavy gradients and sharp curves attest the difficulty of its construction; landslides and washouts have frequently occurred. As the line ascends, fine healthy sub-valleys are reached, and at Huigra are the headquarters of the railway staff and a hospital, which is above the yellow fever zone. On the higher reaches beyond the land is of a barren aspect, but many fertile patches are cultivated, every available space of arable land being tilled, even on hill slopes so steep that such would seem impossible. The town of Riobamba lies at 9,000 feet elevation and is lighted electrically from a mountain stream, and beyond a full view of Chimborazo opens, when clear of clouds, with its immense double peak and snow-clad crest outlined against the blue of the upland sky. It is from Riobamba that most of the revolutionary element of Ecuador has proceeded. The plateau has one of the finest climates in the world, on the authority of Humboldt. A considerable increase in grain-growing in this region has resulted upon the construction of the railway. The highest point on the line is at the summit of the Chimborazo pass, at 11,841 feet, and thence descent is made to Ambato. In this vicinity strawberries, pears, apples, and peaches are produced, and grain, corn, potatoes, and alfalfa along the Latacunga valley, which is comparatively level and about ten miles wide; cattle and horses abound, and the rich pastures are intersected by irrigation ditches. Dairy products, good cheese and butter, are made as a result of agriculture in this high valley. Beyond, the base the giant cone of Cotopaxi is crossed by the line, and the thin smoke-wreath of the volcano hangs in the atmosphere

above; and thence the fertile valley of Machachi, one of the most attractive in the republic, is descended. The rows of volcanoes, clothed in green to the snow-line, which guard this valley are of extreme beauty, as elsewhere described. The people in this region dwell in great *haciendas*, and the relation between the workers and the owners is almost that of lord and serf: feudal in its character, as is the general life and environment, although not without elements of simplicity and rural contentment. There is much of picturesqueness and colour about the native dress and manners in the uplands, but conditions of life are unsanitary. Visible from the line, but at a much lower elevation, is the Chillo valley, with cotton and woollen mills, actuated by water-power from the river, and supplying a large proportion of cheap cloths for the natives. The railway then enters the valley of Quito.

Quito is a city of picturesque character, with houses covered with red-tiled roofs and built in the quaint style of old Spanish colonial or Moorish architecture typical of the Andean capitals. The streets are thronged at times with the Indian element, who enter the city on feast days and market days, and whose bright-hued and vari-coloured ponchos lend animation to the scene. The contrast which this element presents in its general poverty and primitiveness, however, with the dress and demeanour of the upper class, the imported frocks and Parisian hats of the ladies and the correct black coats of the official class, is perhaps more marked than in any other of the Andean towns: for Quito is the centre of a well-populated agricultural country, and at the same time is the centre of Ecuadorian government and society. The population of the city is about 80,000.

The city is traversed by two deep ravines, one of which is arched over with a stone viaduct, and is laid out in rectangular squares with the streets oriented. The buildings are generally of adobe, with the better class houses stuccoed. Upon the Plaza Mayor, or principal square, occupying the south side, is the cathedral, with the archbishop's palace on the northern side, and the finest building in the city is

the Jesuits' church with a façade covered with elaborate carving. Thus the ecclesiastical element dominates, architecturally, as it long did in other ways. On the other sides are the government or national Palacio, or state building, with a long handsome row of columns, and the municipal hall. The main plaza is thus the centre and pulse of civil and ecclesiastical government, a method common in civic economics and town planning in the older Latin American republics. Among other notable institutions is the university, which occupies part of the old Jesuit college, and eleven large monastic establishments, six of which are nunneries, and one, the convent of San Francisco, covers a whole rectangular block, and is among the largest of this kind of institution in the world. There are no large commercial houses in Quito, and the export trade therefrom, consisting mainly in hides and forest products, is small. The city derives its name from the Quitus people, the original inhabitants in pre-Colombian times, who were associated with and overcome by the Incas. A number of interesting monuments and ruins exist in various parts of Ecuador, remnants of both the earlier peoples. The temperature of Quito is equable, having a mean of 58°, and a diurnal variation of 10°, with an annual maximum of 70° and minimum of 45°. Pulmonary affections are almost unknown at the elevation of Quito, which is 9,345 feet above the level of the Pacific. The city has frequently suffered from earthquake shocks, when great damage has been done. Quito is entitled to the gratitude of the world in one respect—it was in its neighbourhood that the potato was first brought to the notice of the Spaniards, and so given to the world, the natives having developed it from a wild variety.

The natives of the Ecuadorian highlands, especially around Quito, show the same talent in textile arts that characterises the Peruvians and Bolivians. Hand-wrought laces of exquisite workmanship are made, especially by the women, and superior hand-woven carpets, also ponchos, woollen and cotton cloths and carpets. The Quito artisans are skilled in wood carving and gold and silver work ; and with other matters these are carried out as cottage indus-

tries. The so-called Panama hats are largely a production of Ecuador, Colombia, and the north of Peru; and the native power of weaving in fibre in these countries is a veritable fine art. In Ecuador the work is a valuable national industry. The annual value of the export of straw hats is about £260,000. Of manufacturing industries there are none beyond those of primitive or local importance, including some cotton factories, a few sugar mills, one or two with modern machinery, and various distilleries.

The mineral resources and industries of Ecuador are but little developed, and cannot compare with those of Peru and Colombia. Gold, quicksilver and emeralds are found. In the gold mines a good deal of British capital has been expended, but without commercial results; but some returns in mining have been secured by American enterprise, and shipments of gold effected. These from the Zaruma mines, in 1910, were of a value of £50,000. Iron, lead, platinum, and quicksilver are other minerals which exist, also salt. There are some deposits of good coal on the coast, which have not yet proved successful commercially as sources of fuel; but which it may be possible to develop in some cases, and petroleum is found at Santa Elena, and a small refinery has been erected.

The various coast rivers of Ecuador afford some 200 miles of navigation, which serve the plantations and small merchants. Upon these lowlands depend almost the entire agricultural industries of the country as concerns export. Among these industries the production of cacao, or chocolate, is the principal; and at the end of the last century Ecuador furnished nearly a third of the world's supply of cocoa beans; but the present proportion is considerably less. This valuable product, which has been described as more valuable than gold mining, might be increased considerably in Ecuador; but absentee landlordism is a contributory factor in large part responsible for the lack of development and enterprise in agricultural matters, as the owners of the cocoa and certain other estates are content with the yield of their monopolies and possessions, and spend their time in a life of leisure in Europe. On the hot lowlands coffee is also

produced, and exported for consumption in Chile. Cotton, sugar, tobacco, rice, and sweet potatoes are other products of the coast, although relatively small in quantity. Much of the sugar-cane produced is used for the manufacture of rum, which, as in Peru and Bolivia, is consumed in the interior, to the serious detriment of the mestizo and Indian classes. The production of sugar in 1910 was 8,750 tons, but it did not meet the home demand. The tobacco grown in Ecuador is of excellent quality. The vegetable ivory nut, or "tagua," is the exported product most valuable after the cacao, and Ecuador forms one of the principal sources of the world's supply of this article, of which some 19,000 tons annually are exported. In the uplands, notwithstanding the latitude, cereals are grown, wheat, maize, oats, and barley, but the production is insufficient for home requirements. In the temperate valleys grapes are cultivated, both for fruit and wine, and on the grazing-lands of the plateaux and slopes of the Cordillera, cattle, horses, and mules are bred, and the last-named exported in small quantities. Sheep are also reared for meat and wool, which latter is used in the domestic manufactures. Sheep farming is an industry capable of extension in Ecuador. Of forest products, cane for building purposes, the well-known caña de Guayaquil, and fibre, rubber, and chichona bark, or quinine, are among the principal. Rubber gathering is a comparatively new industry, and is derived from the *Castilloa*, not the *Hevea* tree, which does not grow on the western side of the Andes. In 1910 552 tons were exported.

There are still vast tracts of land in Ecuador, both on the lower west coast region and in the interior, capable of extensive cultivation ; especially in the coast region as concerns the production of cocoa, coffee, and rubber. Industries of the cultivation of hat and hammock fibres and straws, henequen or sisal hemp, maguey, the tagua, or ivory nut, and many valuable timbers and plants and products, both known and unknown to commerce at present might flourish more extensively. But the conditions of the law, the unsanitary state of the principal seaports, and even of some

agricultural regions, and the character of the natives, who are somewhat jealous of the foreigner, are factors against immigration, and the present labour supply, although poorly paid and extremely backward, is sufficiently occupied. With added labour and effort the exports could be increased many times ; and great areas of land suitable for the growth of cereals, potatoes, fruit, vegetables, fodder, and cattle be brought into cultivation ; and instead of the meagre population of some 2,000,000 the country might support twenty times that number. The value of the Ecuadorian agricultural resources has increased nevertheless from £1,500,000 in 1900 to more than £3,000,000 at the present time.

The Galapagos islands may, in the future, be of some considerable strategic value, lying as they do in the direct path of vessels approaching Panama from across the Pacific ocean from the south-west. They include five large and ten smaller islands, lying exactly under the equator, the nearest being 580 miles from the mainland ; the total area being about 2,800 square miles. They contain a large number of volcanoes or craters, some active, and their name is derived from the Galapago, a species of giant tortoise which abounds there. The shores are fringed with mangroves, and thick vegetation covers parts of the interior, but generally the land is parched and rocky. The temperature is modified by the cold Peruvian current somewhat. From their remarkably isolated position, and their natural history never having been interfered with, they possess a peculiar flora and fauna. The guano and orchilla moss are products of some value to Ecuador, and there is a penal settlement on Chatham island.

Foreign enterprise in Ecuador is represented principally by the railways, electric tramways, and gold mines ; and there are two German and one British enterprise controlling large cocoa estates, with rubber plantations. The Tenguel plantation, under British control, is an important estate, and farm hands have been brought in from Colombia.

The value of the foreign trade of Ecuador, like that of some others of the smaller South American states, does not fluctuate greatly, and for a number of years has varied

from twenty-five to thirty-five million sucres per annum for the exports, and somewhat over half that amount for the imports; that is, exports to a value of two and a half to three and a half million pounds sterling, the sucre being equivalent to two shillings. The British pound sterling is legal tender in Ecuador (as in Peru), its value being ten sucres. The imports consist mainly of textiles, hardware and machinery, from France, the United States, and Britain; also Germany. Ecuador broke off relations with Germany during the war. In the year 1921–2 the petroleum fields—the Anglo-Ecuadorian Company—began to give greater promise of oil production. The principal shipping interests on the coast, at Guayaquil and other ports, are British, Chilean and Peruvian, each of which now maintains coastal liners between Panama and Valparaiso.

The national revenue of Ecuador fluctuates around 20,000,000 sucres. There is constant difficulty in meeting expenditure and the service of the Foreign Debt.

The future of Ecuador is bound up with the upraising of its working-class and Indian folk, and no real progress is attainable as long as these remain ignorant or exploited. There are excellent elements in the country among both the upper and the lower strata of its society, and it is time that a wholesome and genuine forward movement were made—in a land which Providence has dowered with more than a sufficiency of natural resources. It is time that the ruling class should forget their political strife and personal ambitions, such as have been so marked a feature, often a terrible one, of the national history. The development of agriculture on the one hand, and of small manufacturing and local or even cottage industries, for which the native aptitude is considerable, on the other, are needful elements in the desired progress.

CHAPTER IX

THE REPUBLICS OF THE ANDES—BOLIVIA

The great mountain republic of Bolivia, notwithstanding that it has been, to the outside world, little more than a name, partakes very largely in both the historical and topographical interest of its more prominent neighbour Peru, with which it has much in common, and of which in viceregal times it formed part. The same vast mountain range of the Cordillera of the Andes—more stupendous indeed in some respects than in Peru and Ecuador—dominates the land and has determined its life, character, and environment. The people who dwell there, and the social system, share equally with Peru their origin, but preserve their own traditions and individuality.

Bolivia is bounded on the west, and shut off from the Pacific coast, by Peru and Chile : on the east and north lies the enormous expanse of Brazil, and on the south Argentina and Paraguay. Thus the republic is entirely an inland country, without direct access to the seaboard : a condition due to the loss of the littoral province of Antofagasta in the Chilean war. It is partly as a result of this isolation that Bolivia has remained comparatively so little known to the outside world, and that its economic development has been so long delayed. Bolivia is the third political division in point of size in South America, estimates of its area varying between 520,000 and 703,000 square miles ; nearly two-thirds of the country lie within the Andean mountain zone : the remainder forming part of the great Central Plains of the continent.

The Andes reach their greatest width and development in this part of South America ; displaying colossal parallel

ranges crowned with snow-capped peaks and enclosing broad tablelands and profound river valleys. The snowy range extending from mount Sorata or Llampu, to mount Illimani, in an unbroken line, is one of the most striking portions of the Andes; as is well seen from the west in crossing lake Titicaca: and the great lacustrine basin of Titicaca, the lake and the desolate *punas* or plains surrounding it, are overlooked by a number of snow-clad peaks, ranging from 19,000 to 21,000 feet elevation. Bolivia, although lying entirely within the tropics, is, like Peru and Ecuador, characterised by climatic conditions of an Arctic nature in its rugged, elevated territory. The mountain masses of Bolivia form one of the most impressive and inclement regions in the world: and possess features of considerable interest and economic value. Thus, the greater part of the west and south central portions of Bolivia is mountainous, and many of the loftiest summits of the Western Hemisphere, the main line of heights, are contained in the different ramifications of the Eastern Cordillera, or Cordillera Real. Between this and the Western Cordillera is included part of the great plateau and interior basin, the Altiplanicie Central, about 500 miles in length, with an elevation of 12,000 to 13,000 feet, the northern half of which is occupied by lake Titicaca, and the southern parts by lake Poopo or Aullagas, and other saline bodies of water. These constituted at one time a vast united inland sea, the outlet of which was through the Beni river, to the Amazon, through the gorge of La Paz, as before described. The loftiest mountain summits are the non-volcanic peaks of Illampu, 21,490 feet, and Illimani, 21,190 feet, both in the department of La Paz. Huayna Potosi, between these, has an elevation of 20,260 feet. Potosi, upon this mountain, is the highest town in the world.

Bolivia is, however, by no means of an entirely mountainous or elevated nature: for more than a third of its area is composed of alluvial lowlands. North and east of the mountains the country falls away in vast, undulating plains to the valleys of the Amazon basin, and the Gran Chaco of Argentina. A part of this great lowland region is covered

with extensive swamps, subject to inundation and of little use at present for pastoral or agricultural purposes: but the extensive llanos, or plains, of Guarayos and Mojos, contain rich agricultural districts, where cattle-raising has been successfully carried on since the industry was introduced by the Jesuit missions in past centuries. These great plains and the valuable forestal areas, and the fertile sub tropic valleys in the lower Andean region, redeem the country from a natural reproach of sterility; and they demonstrate its capabilities for sustaining a large population. The outlet for the great plains is the Madeira river and its tributaries, which are being improved for navigation to the Amazon: especially by the Madeira-Mamore railway: and to the affluents of the River Plate, with their outlet through the republics of the Plate.

The variations of temperature experienced in Bolivia, due to elevation, as opposed to latitude, are very marked. Upon the high tablelands, or *puna brava*, as the natives term the cold highlands, in distinction to the *yungas*, or lowlands, furious storms are encountered, with striking electrical effects, as described elsewhere. Lake Titicaca is at times lashed to fury by these storms. The lower *punas* from 11,000 to 12,500 feet, which include most of the great central plateaux of Bolivia, have two seasons: winter and a cold summer-autumn, too short for the production of any crops except barley and potatoes. Above this the *puna brava* extends, a bleak, inhospitable region, whose only inhabitants are scattered miners and shepherds; and bands of alpacas, llamas, and vicuñas; and sheep where the scanty vegetation affords any means of livelihood for such. The tin mines of Bolivia have acquired some importance: they are situated in extremely high bleak regions, where the conditions of life are trying for the foreigner. The mining communities in this part of South America form the highest inhabited places on the globe.

The total population of Bolivia is estimated at nearly three million, more than half of which are Indians, 40 per cent. mestizos, and the remainder whites, more or less mixed with the mestizos. As in Peru and the other Andean countries,

the Indians of the highlands are those who lived under the semi-civilisation of the Incas, and are now Christianised. The Indian of the forests, the Guayos and Chiquitos and others, are distinct; but they were organised and taught by the Jesuits, and since the expulsion of these have retrograded somewhat. The Indians' worst vice is the excessive use of alcoholic drinks, for which they will barter almost anything. The fiery rum they consume is manufactured largely in the sugar estates of Bolivia and Peru. Sunk in a lamentable state of ignorance, due partly to this defect and to the attitude of the ruling and propertied classes, these generally peaceful and industrious people show little or no signs of social advancement: nor can it be said that they are increasing in numbers, except in respect of one or two tribes, who in the lowlands enjoy better conditions. Of the savage tribes of Indians in the very remote and practically unexplored regions little is known; and they still dwell unmolested in almost impenetrable wilds. The mestizos, who number about half a million throughout the country, are also extremely backward, taking into consideration the advantages of the Spanish language and possibilities of civilisation which they possess. They are often apathetic, superstitious and intemperate, and the century of self-government which Bolivia has enjoyed has not shown much result. It would be unfair, however, to suppose that they differ greatly in these matters from their neighbours, and it cannot be doubted that education may in time bring about their development as a useful and active people, and upon them the country must mainly depend for labour. Much good might be brought about by vigorous immigration, and of this the governing classes are generally aware; and efforts are made to encourage immigrants. But time must elapse before the tide of emigrating humanity from Europe is likely to be directed to such remote regions.

The city of La Paz, the principal city of the republic, is attaining growing importance due to increasing railway building. It is served by the line from Antofagasta, on the Chilean coast, the seaport formerly belonging to Bolivia; and the railway which reaches the capital via

Uynini and Oruro, skirting lake Poopo. The southern railway of Peru, from Mollendo, Arequipa and Puno, via lake Titicaca, and the new railway from Arica to La Paz both put the city in communication with the coast, and thus it enjoys three routes of access. From Uynini a line to the south at Tupiza, when completed, will unite the railway system of the republic with that of the Argentine, which would be of great importance, as this route will give Bolivia an outlet by rail to the Atlantic. The construction of other lines is projected towards the navigable affluents of the Amazon, mainly the Beni, which is the principal waterway of Bolivia. The government of the republic is committed to a vigorous railway-building policy, limited only by its financial resources, which there is tendency to tax too heavily, as later observed. It is but a few years since La Paz was isolated from the world, without means of transport except that of ill-maintained coach and mule roads, and the advent of the railway brings the community to another age. The approach to La Paz by rail is striking and peculiar. Traversing the high uplands after ascending from the coast, the line approaches the edge of a deep precipice, and the city is suddenly seen in its marvellous valley 1,000 feet below, spreading out with its towers, buildings, parks, and avenues seen in miniature, reminiscent of a relief map or model. The descent to the city from the plateau is performed by an electric railway, which descends the side of the great barranca, or valley.

La Paz is not the political capital of the country, that distinction belonging to Sucre, a town of less importance. The population of La Paz is estimated at about 107,000. The city shares the characteristics of its sister mountain capitals of Spanish America, especially of Quito and Arequipa, in the presence of a large Indian population, whose national dress and primitive occupations form a strongly contrasting background for the upper classes, with their Europeanised manners and costumes. The sandalled and poncho-covered Indian in the streets and plazas rubs shoulders with the black-coated professional and upper classes, and contrasts with the Parisian attire of their ladies

The Indians form about 35 per cent. of the inhabitants of the city, and constitute its menial and poorest class. The white population, numbering some 40,000 souls, constitutes the ruling and professional classes. They are descendants of Spaniards and other Europeans who have remained unmixed, or only partially mixed, with the aboriginal inhabitants; and in them is mainly vested the wealth and education of the community. They are lawyers, doctors, bankers, business men, statesmen, politicians, and so forth, and form a class much apart. The membership of the senate and congress are drawn from this class, which holds all the official posts., They dress well, after the manner of London or Paris, and are to be seen, as in Lima or Mexico, or other Latin American capitals, in the theatres and cafés whenever opportunity presents. The women dress equally well, often extravagantly, after the manner of the Latin American upper class generally, who are notably addicted to extravagance in dress; but they are of the attractive and affable character which is a pleasing feature of the Latin American woman; and the invigorating environment of the mountains has produced in Bolivia a complexion less pallid than among the women of the coast cities. The mestizo class, between whom and the whites no hard and fast line can be drawn in the upland regions, forms about 32 per cent. of the population of La Paz, and to them fall the petty town industries of small shopkeeping; and they are also mechanics, artisans, domestic servants and the like.

Due to the elevation above sea level, of 11,000 feet, the climate of La Paz is bracing, often cold for the European, and the cold is felt more keenly by reason of the absence of fires in the houses. The mean annual temperature is 50° F. Stoves are not used in La Paz, and this is the usual Spanish American custom; the inhabitant considers that pulmonary troubles accrue from the use of such. Pneumonia and bronchial complaints are common, but consumption is rare.

The river Chuquiapo, upon which La Paz is built, in the deeply-wooded valley of the Cordillera Real, was, it is considered, the outlet of lake Titicaca in earlier times. The valley is of a barren nature, and its precipitous sides, scarred

by torrential rains and dyed by solutions from mineral ores, rise 1,500 feet above the city to the margin of the great Titicaca plateau: the city lies in the *puna* elevation and zone, notwithstanding its situation in the depression, and the summers are short and cool. The valley descends thence through a more fertile region to the temperate, and lower down to the tropical zone. The transverse streets of the city are steep and irregular, the ground rising rapidly from the river, and are generally narrow and roughly paved, with numerous small bridges. The cathedral was begun at the time when the mines of Potosi were pouring out their wealth, but was never finished, due to the poverty of the community later. It has a finely-carved stone façade, facing upon the great plaza. There are other notable buildings of brick and stone, but the houses of the poor are of mud. Among them is the old San Andre university, in which fortunately are preserved many relics of the Inca ruins of Tiahuanaco and elsewhere; saved from the vandalism of the modern railway builders, who took away trainloads of prehistoric stone blocks and sculptures to form bridges and warehouses.

Bolivia is divided into eight departments and a territory, as follows (estimate of 1918):

Department.	Area Sq. miles.	Pop.	Capital.	Pop.
La Paz	53,777	734,000	La Paz	107,300
El Beni	102,111	50,000	Trinidad	3,200
Oruro	19,127	137,000	Oruro	6,100
Cochabamba	23,328	513,000	Cochabamba	30,800
Santa Cruz	141,368	328,000	Santa Cruz	25,800
Potosi	48,801	516,000	Potosi	30,000
Chuquisaca	26,418	320,000	Sucré	11,700
Tarija	33,036	160,000	Tarija	30,800
Nat. Territories	192,260	63,000	Riberalta	1,000

There are no other populous towns beyond the provincial capitals. Four of these capitals, those of Sucré or Chuquisaca, La Paz, Cochabamba and Oruro, have at different times served as the national capital. After the revolution of 1898 the capital was fixed at La Paz, which is the commercial metropolis, and more accessible than Sucré. Among the smaller towns which have attained some prominence

due to some special industry or commercial position may be instanced the Huanchaca mining centre of Pulacayo, with a population of 8,000, where more than 3,000 men are employed in the silver mines and works of this important mining company ; Uyuni, with a population of 3,000, at the junction of the Pulacayo branch line with the Antofagasta and Oruro railway, where converge several important highways and projected railways ; and Tupiza, with a population of 2,500, the commercial and mining centre near the Argentine frontier, and the terminus of the Argentine railway extension into Bolivia. All these towns are in the department of Potosi. Viacha, with a population of 2,000, is a station on the railway from Guaqui to La Paz, fourteen miles from the latter, and the starting point of an important projected railway to Oruro. In the department of Cochabamba is Tarata, with 5,500 inhabitants, and Totora, with 4,500, two trading centres of some importance ; and in the department of Santa Cruz is Ascension, with a population of 5,800, with a large mission station in the Chiquitos hills.

The government of Bolivia is a highly centralised as opposed to a federal system, representative according to its constitution, but autocratic in its working. The constitution of 1880 was a model in its form and intention, like those of the Latin American republics generally ; a result of the lawyer-like temperament of their statesmen. The Executive is composed of the president, vice-presidents, and five ministers of state, whose portfolios are : foreign relations and worship ; finance and industry ; interior and " fomento " ; justice and education, and war and colonisation. The legislative branch consists in the senate and chamber of deputies ; the first of sixteen members, two from each department, elected by direct popular vote for a period of six years with one-third retiring every two years ; and the second of seventy-two members, elected for four years, one half retiring every two years. Suffrage is exercised by all male citizens twenty-one years of age, if married, or eighteen if unmarried, who can read or write or own real estate or have an income of 200 bolivianos per annum. The electoral body is by these reasons small, and no matter

what party is in power the community is ruled and controlled by a political oligarchy. The Judiciary consists in a national supreme court, and eight superior district courts, and lesser officials. The departments are administered by prefects, appointed by the president, and in their turn they appoint all subordinate officials, sub-prefects, *alcaldes* and *corregidores;* there are no legislative assemblies in the departments, and the system of government easily tends to become autocratic. Given the sparsely settled regions and character of the people this is to a certain extent inevitable.

Education in Bolivia is backward, and only a small proportion of the people can read and write, but under the free and compulsory educational system, the number of schools is increasing considerably of late. Spanish, which is the official language, and that spoken by the educated and mestizo classes, is in a minority, the people generally speaking their aboriginal Quechua, Aymara, and Guarani tongues; and these form the bulk of the population. Many of the schools are entirely of modern equipment, and there are a number of foreign teachers. There are only two universities in Bolivia which possess more than one faculty, those of La Paz and Sucré, at both of which degrees may be obtained in law, medicine and theology; while at La Paz there is also a commercial faculty. There is a normal school for training teachers of Indians at La Paz; also a normal school for teachers, and a national school of commerce, with a women's section. The total number of schools in the republic is 1265, with about 60,000 pupils. There are Boy Scout and Girl Guide organisations, which have been well received by the public. The schools known as the American Institute at La Paz and Cochabamba have met with considerable success and receive a government subsidy. The national mining school has acquired some importance, and the engineering profession should attract the Bolivian.

As regards the church, the Bolivian state supports the Roman Apostolic religion, and public worship is prohibited by law, as in Peru, except in the foreign colonies, where it is tolerated, and this toleration is tacitly extended to resident foreigners of other religions. The census of 1900

shewed 1,609,000 of the Roman Catholic population, and 24,300 of other creeds. The Indians greatly reverence the clergy—reverence mixed with the superstition of their ancestors ; and they are deeply influenced by the ceremonies of the church, which are scarcely modified since the early Spanish times. Bolivia contains an archbishopric and three bishoprics. Mission work among the Indians is in charge of the Propaganda Fide, which has five colleges and a number of missions, with a state subsidy, and some 20,000 Indians are directly controlled. The religious orders maintain several convents.

Industrial activity in Bolivia is in a rudimentary condition. Herds of cattle and horses are maintained on the plains, and meat is supplied, both fresh and as jerked beef, from the saladeros, or salting establishments, for home consumption. The breeding of llamas and alpacas on the high uplands is a peculiar industry of Bolivia, as it is in Peru ; and the upland flocks supply the world's demand for the various classes of the wool, including the vicuña wool. The natives weave their own garments, employing primitive spindles as in the time of the Incas, and looms of rude early Inca or colonial type, as described for Peru. They produce an excellent home-spun, and very fine fabrics are woven both from sheep and vicuña wool, the women being especially expert : and the fabrics thus manufactured by the women often bring a high price. Formerly the Cholos of Bolivia and Peru made their own beautiful dyes, but these are being supplanted by the cheap German article, and the same is happening with the woven fabrics to some extent, to the impoverishment of these excellent cottage industries. The llama and alpaca were domesticated by the early Peruvians far back in history before the Spanish advent, whilst the vicuña and guanaco are wild and are encountered in great bands or smaller groups by the traveller on these inclement uplands. The llama is the most valued possession of the native. It performs all his carrying trade, except where mule-trains are in use, and marches along at four miles an hour, carrying up to 100 lbs., feeding itself as it goes. Its coarse wool furnishes the material for the native's clothes, from which

the Indian and his women weave their cloth, sometimes resembling in pattern and texture a British tweed. The llama is the only hoofed ruminating quadruped or beast of burden that America, in its pre-Hispanic condition, produced, and prior to the advent of the horse and ox was the only servant of man upon the desolate steppes of the Andes, and remains so over vast areas to-day.

The fauna also includes deer, the monkey, tapir, wild boar, wolf, chinchilla, anteater, jaguar, foxes, wild cats, ostrich, condor, flamingo, parrot, wild turkey, bird of paradise, quail, snipe, and all kinds of water-fowl. The forests are characterised by a great variety of genera and species: a single acre of land may contain hundreds of different trees and shrubs, with many orchids and other rare and beautiful flowers and timbers.

Among agricultural products maize and potatoes were valuable native foods before the Spanish advent, and are the staple articles of diet. The sugar-cane plantations of the lowlands are largely devoted to the production of rum, which commands a good sale; and the manufacture of this *aguardiente* is often more profitable than that of sugar. Its consumption, however, is a serious vice, and is extremely detrimental to the Indians, but national interests are unfortunately often secondary to private profits and the sale to the Indians of alcohol continues. The Indians are also fond of the cakes of brown sugar, which are largely consumed. Tobacco, cocoa, coffee, all of excellent quality, are grown in the warm valleys of eastern Bolivia, but have no market beyond the local one. Coca, which produces the leaf so highly prized by the Cholo population of Bolivia and Peru for its sustaining qualities, and which is the raw material of cocaine, is cultivated to a considerable extent in Bolivia, as is the quinoa, a valuable product and staple article of food among the natives of the Andes. The Bolivian cinchona bark yields the highest percentage of quinine sulphate of any in the Moñtana, and large areas of virgin forests of the trees exist, although they are diminishing rapidly.

Notwithstanding its great natural resources, the cost of

food and living, fuel and other matters in the Bolivian capital is often very high, and has increased rapidly of late. The fault is laid by local economists partly to the high freight charges on the railways and an increase of commercial activity resulting on the increased production of tin, and to heavy importations of gold by the banks as a reserve. The prices of various articles of common consumption in such situations is very high; even those procurable in the country. It is a common condition of Latin American towns that small local supplies, fresh vegetables and so forth, are difficult to obtain, the result of indolence or ignorance in matters of market gardening. Imported tinned goods are largely consumed by the upper classes, but these are expensive.

Fuel in Bolivia is also exceedingly high-priced. Coal on the railways to the coast costs £8 per ton, and in the Potosi mines, £14; in the town of Potosi wood fuel costs £6; charcoal, £7 10s.; yareta and taquia, the vegetable and animal fuels before described, £1 6s. per ton. The exploitation of the petroleum beds should be of value in this connection.

As shown, manufacturing in Bolivia is still in a primitive condition, textile fabrics being made largely as cottage industries; and fine, serviceable fabrics are made in the Andean departments, as in Peru. Saddlery and tanning are carried on with excellent results, and robes and rugs from alpaca skins are made, for which there is a demand. Native industry also supplies cigars and cigarettes, soap, candles, hats, gloves, cheese, pottery, and starch. Some of the Bolivian pottery is excellent and of handsome appearance, and the ceramic art was largely inherited from the Incas. Sugar is made by old-fashioned methods, and there is some production of wines and spirits.

Water power is one of the native assets of Bolivia, which will doubtless be more fully developed in the future.

The flora of Bolivia is extremely varied, embracing both the products of the cold and tropical zones. Among the alimentary plants are the following: wheat, corn, chickpeas, beans, manioc, bananas, sweet and white potatoes, barley,

rice, pea-nuts, olives, almonds, cacao, coffee, and nutmeg, and many others. There are many kinds of fine woods suitable for all industrial purposes, such as railway ties, building and cabinet making, some of which are as hard as iron, and valuable from that reason. Rubber, Peruvian bark, and a multitude of medicinal plants abound in this soil, and among the indigenous plants are the palm, cacao, bamboo, the maté (or Paraguay tea), and the coca. The export of rubber reaches some 5,000 tons. Bolivia produces also balsam, bananas, vanilla, copal, cotton, coffee, sugar, tobacco, corn, potatoes, the chirimoya, farina, and sarsaparilla. The coffee and cocoa are conceded to be of the finest quality. The Bolivian Indians chew large quantities of the coca leaf. Fruits and all tropical products are abundant, where cultivated.

The mineral resources of Bolivia are very important, if, with the exception of tin, comparatively little exploited. The gold mines have been accredited from an early date with a large production, estimated, as from the middle of the sixteenth century to the end of the nineteenth, as having yielded a value of more than £450,000,000, largely from placer mining. The value of the annual output of gold is about £70,000 per annum ; and that of silver more than £500,000. The Potosi mine, with a large output of silver during viceregal times, was one of the most famous in the world. After the Conquest the Spaniards rapidly extended their search for gold and silver throughout the land. In 1548 Alonzo de Mendoza founded La Paz—to-day one of the principal cities in the republic—attracted thither by the rich gold ore of the rivers of that section. The mines of Chiquiaguillo have produced great quantities of gold and nuggets of considerable size and value, and in 1718 the Marquis de Castel-Fuerte sold, among other nuggets, one encrusted in quartz weighing 52½ ounces, of which 47 were gold. The city of Potosi was founded in 1545, and fifty years later it had reached a population of 160,000, due to the enormous richness of the mountain at whose foothills the city stands. The city became a goal for all classes of adventurers : bankrupt Spanish nobles, merchants anxious

to acquire rapid wealth, and all kinds of men contributed to make Potosi a centre of prodigality, romantic adventure, revelry and disorder. The chronicles of the city are interesting, and depict the customs of those ages, with all their preoccupations and superstitions, the spirit of chivalry and love of adventure. Spanish hidalgos prided themselves on squandering great fortunes in feasts and revelry, which often caused jealousy and strife among the bands into which the city was divided.

Religious fanaticism also was a characteristic of the times: and in order to insure their salvation or pardon for their sins, the miners gave very large sums of money for the building of churches or convents, as was also done in Mexico, and for this reason it is that in the old Spanish American mining towns many churches are found to-day. The mines of Potosi had been worked by the Incas, and at night, their historian records, the hill was lighted up by their innumerable little furnaces, called "guayras," wherein the force of the wind was employed in primitive smelting.

Silver was first discovered at Potosi in 1545, and the yield up to the present time from the mines has exceeded three billion dollars. The production of tin follows immediately after that of silver, the chief centre bring Huanuni. Gold is found in the Andes and in the several departments of La Paz and Santa Cruz; the gold washings of Tipuani have yielded large results. Copper mining has been extensively developed, especially in the districts of Corocoro and Chacarilla. Opals, diamonds, emeralds, and topazes are found. The value of silver exported in 1918 was 7,500,000 bolivianos, with 26,000 tons of copper: in 1897 the production of tin was about 3,000 tons, but reached 17,000 in 1905, and 49,000 tons in 1918. The development that railway facilities will offer to this industry, as well as to the general progress of the country, will doubtless be considerable. The exploitation of these mineral resources has been hindered by the distance of the mines from navigable water, and the expense of transporting the metal to the coast, but since the advent of the railways and the discovery of coal, which is found in

the departments of Beni and Chuquisaca, the revival in mining enterprise has been noticeable.

Probably the obstacles offered by the vast mountain walls of the Andes to free traffic and means of communication are compensated by the prodigious quantity of minerals these contain, and the region of the Cordilleras must be regarded as a great storehouse of natural wealth. The silver mines of Potosi, Oruro, Colquechaca, Huanchaca, and many others, have contributed hundreds of millions to the richness of the world; and no less important are the deposits of copper, bismuth, zinc, cobalt, gold, and tin.

Tin to the value of more than £2,000,000 annually has been shipped from the tin mines; a single Bolivian mine-owner draws 300,000 dollars yearly from this source. The principal deposits of tin ore are found in the eastern highlands of the main Cordillera; Sorata, Illimani, Huayna and Potosi. The majority of the deposits are still unworked, and may be expected to yield largely in the future. La Paz is the principal mining district in the north, Oruro in the centre, Chorolque in the south, and Potosi in the east. Oruro may be regarded as the central point of the tin-producing industry. An outstanding feature of the Bolivian tin deposits is that they were first worked for silver, and whilst some of them still produce it, in others the metal has entirely disappeared and given place to tin ores. Huanani, the richest of the tin mines in the department of Oruro, lies some fifteen miles from the Antofagasta railway. The, Cerro de Pozcani mine is in a wild, broken, mountainous district at an elevation of 10,000 feet, and a number of lodes have been exposed, one yielding up to 20 and 50 per cent. of cassiterite. The Morococala mine, south of Huanuni, has a vein of twelve to fifteen feet wide. In northern Bolivia the Huayna-Potosi mines, north of La Paz, and the Inquisivi mines are prominent, lying in the highlands at the south-eastern extremity of lake Titicaca—mines with strong lodes of good width and of high-grade cassiterite ore, at elevations of 16,000 feet, and capable of a large output when fuller development shall have been undertaken. The relatively slow development of the industry, however, lies in the meagre

railway facilities in these high mining districts of the Andes. British, French, Chilean and other capital is invested in the working of the tin deposits, which are perhaps the most valuable in the world.

The occurrence of petroleum in Bolivia is a fortunate one : and as a consequence of surveys of the petroliferous formation occurring in the south-eastern frontier of Bolivia, interest has been displayed in acquiring mining rights in that region, with a view to its exploitation. The existence of oil has been proved along a belt of country extending from north-west to south-east, a distance of over 150 miles, down to the Argentine boundary at Yacuiva. Thus, the petroliferous zone traverses the eastern provinces of Santa Cruz, Sucré, and Tarija, and continues into the Argentine republic to Comodoro Rivadavia, where noteworthy results have been obtained by recent borings. About 66,000 hectares have been taken up in holdings, embracing altogether about 230 square miles of ground in the oil-bearing region. A law was sanctioned at the end of the year 1911 exempting the holders of mining lands, for the production of petroleum, peat, coal, lignite, naphtha and sulphur from the annual fiscal tax for a term of five years. As the projected Yacuiva-Santa Cruz railway must cut through the centre of the oil-bearing region, the difficulties of transport will be obviated in the near future. The production of oil would be of great advantage to Bolivia, where no coal measures of commercial importance are as yet known to exist.

The great geological agencies that have transformed the continent of South America, and produced the uplifting of the Andes are very marked in Bolivia. The high plateau occupies an area of more than 66,000 square miles, with a mean altitude of from 10,000 to 13,000 feet above sea level : and the forests and vast plains extending eastwards, with about 7,000 miles of navigable rivers, comprise a fertile agricultural territory embracing more than 304,000 square miles.

The hydrographic system and rivers of Bolivia fall into three divisions : the Amazon, the Plata, and the Central Plateau or Titicaca systems. The first embodies the rivers which traverse the country, flowing north directly and

indirectly into the Madeira, one of the largest tributaries of the Amazon, with the smaller affluents of the Acré and Purus in the north; a drainage area comprising more than half the surface of the republic. The Mamoré and the Beni unite to form the Madeira in latitude 10° 20' south. The Mamoré is 600 miles long, three-quarters of which length is navigable from Chimoré, at an elevation of 925 feet above sea level, to the rapids, and runs mainly through a vast level plain. Its principal tributary is the Guapay or Grande, rising to the east of lake Aullagas, with a tortuous, obstructed course, 700 miles long. The Beni and its great affluent, the Madre de Dios, are of smaller volume but greater economic importance, as they are navigable, and the region drained is of much fertility and dowered with great forests. The railway improvements around the rapids of the Madeira-Mamoré are one of the most valuable economic developments in the heart of South America, as described in the chapter on the Amazon valley. Bolivia formerly possessed a fluvial port at Puerto Acré on the Acré river, to which ocean steamers could ascend from Pará, but this was first disputed and then acquired by Brazil. The south-east drainage basin of Bolivia, that of the Paraguay river of the Plate system, is smaller and of less economic importance than the foregoing. The main stream is the Pilcomayo, rising on the east slopes of the Eastern Cordillera near the southern extremity of the Aullagas plateau, and flowing east and south-east through the Sierra region to the Bolivian Chaco. When the trade of southern Bolivia in the future greatly develops, the opening of a navigable channel in the Pilcomayo may be undertaken, giving river communication directly with Buenos Ayres and the Atlantic. Due to the nearly level country traversed, the current of this river is sluggish and its channels generally obstructed, but little is known of its tributaries in the Chaco. Another considerable stream of the region, which becomes lost in the great swamp areas of the Bolivian plain, is the Parapiti, which flows for about 150 miles. The third hydrographic system is that of Titicaca and the Desaguadero river, elsewhere described: and the boundary line of Bolivia traverses lake Titicaca midway.

The conditions of climate, temperature, rainfall, and seismic and other phenomena in Bolivia are of extreme peculiarity and interest. Although the territory lies within the torrid zone, the temperature is not that corresponding to such a zone ; it varies according to altitude, latitude, nature of soil, direction of the winds and distance to the Cordilleras. In the valleys, within a few hours, temperature will show a variation from 54° to 62° F., while in the vicinity of the mountains the change is from 46° to 59° F. At an altitude of 9,800 feet the annual mean temperature is 46° F., while at an elevation of 14,700 feet it is 42° F. Sorata is a town at 8,900 feet and distant about six miles from the region of perpetual snow: it is situated in a valley, and the climate is mild and soft, notwithstanding its proximity to the snow. Generally speaking, the climate is healthful and suitable for settlement by European races. The mean temperature of the lowlands of the Amazon up to an altitude of 2,000 feet above sea level is 74°, to an altitude of 8,000 feet it is 66° ; and in the Central Plain, where the altitude varies from 10,000 to 12,000 feet, it is 50°. The mountains are covered with perpetual snow, and on the highest tablelands there is frost every night in the year, but the air is dry and pure. At Potosi, which has an elevation of about 13,300 feet, the nights are always piercingly cold, but the rays of the sun are hot and powerful between 2 and 5 p.m. La Paz, at an elevation of 12,000 feet, has a mean annual temperature of 50°. Between the altitudes of 9,500 and 11,000 feet the climate is temperate, and wheat and maize are cultivated, while in the tracts of the *Medio Yungas,* which descend to about 5,500 feet, the climate is such as to permit of the successful cultivation of both tropical and semi-tropical fruits. This is the zone of the great cinchona forests, whose luxuriant development is one of the marked features of the flora of the Eastern Andes. " Perpetual summer," as it has been termed, reigns in the lowest regions, or *Yungas,* comprising the territory below 5,000 feet, producing all tropical fruits and vegetation ; and the northern plains have a hot, humid atmosphere, and are covered with dense forests.

As described, the eastern region contains valuable grazing-lands, where the cattle industry may become lucrative. At present large herds of wild cattle exist in these great plains.

Owing to the peculiar topographical formation of the country, electric and other phenomena are of constant occurrence, the principal zone where such disturbances take place being the Altiplanicie or Great Plateau. As the atmosphere is heavily charged with electricity, both in summer and winter, dry or electric storms are of frequent occurrence both on the plateau and in the valleys. Before the rainy season sets in electrical accumulation becomes marked on the plateau region, its most violent manifestations taking place toward the eastern section of the tablelands. An electrical storm in these regions is always a most imposing spectacle, as the tremendous force of the wind, almost equal to a hurricane, and the heavy electrical accumulation in the clouds produce terrible atmospheric explosions and violent detonations, while the surface of the ground sparkles and crackles.* During this season, when there have been no electrical storms for several days, large masses of clouds hang over the Cordillera, covering it almost to its base, rising or descending, according to the variation of the temperature of the lower atmospheric strata. In such case the accumulated clouds become luminous at night, shedding a tremulous bright halo, accompanied by intermittent flashes of most vivid light, until every mass of clouds becomes a powerful centre of incessant detonations, producing a constant low rumbling sound. Sometimes this phenomenon takes place at a single point, as happened in 1878, when the Illampu peak, near the town of Sorata, suddenly became brilliantly lighted, while its surroundings were in total darkness. Besides these phenomena, mirage is also remarkable, notably on the Oruro plains, toward the Atacama desert and in the Upper Chaco, especially during the winter.

Bolivia has but a small portion of its territory lying within the area of volcanic disturbance. The Bolivian Andes do not show any volcanic signs, except in the western branch of the Cordillera. Under these conditions the central section

* Foreign Office Report.

of the country is comparatively free from violent earthquakes, the few shocks experienced being the last vibrations of the seismic waves originating in the Andes Chain. Severe shocks were felt in the central section in August, 1892, and July, 1896. In April, 1582, a portion of the plateau south of the city of La Paz suddenly collapsed, forming the Achocalla valley. At the beginning of the sixteenth century the town of Ancoanco (south-east of La Paz) disappeared entirely, its site being marked at present by swamps and lagoons. In 1837 one-half of the Quilliquilli hills, near La Paz collapsed, and in 1873 the land near Ancoanco again suffered a similar depression. The great basin where La Paz is situated is in reality the result of a geological depression, which changed the Choqueyapu river. In the eastern section of the republic siesmic disturbances are but rarely felt. There is a tradition that a town disappeared at a place called Opaburu, in the department of Santa Cruz. Not very long ago the town of Tacuru, in the same department, disappeared under an eruption of mud, which eventually formed a lake, the waters of which rose 35 feet, drowning the entire population of the district. Thermal springs are abundant in Bolivia, their temperature varying greatly. It cannot be doubted that many elements of future value exist in these high, remote regions, little suspected at present.

The construction of railways in Bolivia, or the intention for such, has been the most marked feature of economic policy of the republic: as if Bolivia, long shut in and isolated, were resolved to free itself from isolation. Very extensive concessions have been granted and agreements entered into with foreign financiers, and it has been seriously questioned whether the resources of the republic have not been too seriously compromised in the guarantees undertaken for the subsidies. The amount of these liabilities is calculated at a total sum of £390,400 per annum,* actual and prospective. The construction and projected construction under the subsidies include that of the Bolivia Railway Company, the Eastern railway of Bolivia, the Cocha-

* Foreign Office Report on Bolivia, issued 1912.

bamba-Chimore railway, the Fomento de Oriente, and the La Paz-Yungas railway. Part of the funds for the first-named enterprise was provided by the sale of the Acre territory to Brazil, for the sum of £2,000,000. A great deal of the capital is of North American origin, as is the work of construction. The lines will open up the rich mineral and agricultural sections of the republic, and in some cases the traveller will be conveyed, within a couple of hours' travel, from regions with a temperature of 40° to that of 70°, descending through the striking landscapes of the eastern chain of the Andes.

Extensive land grants have been made in connection with these concessions, in addition to money guarantees ; grants of so large a nature that some fears have been expressed as to the possibility of so large an area of public land not being at the government's disposal. Bolivian territory generally is still unsurveyed, and part of it consists in almost inaccessible bogs, some of which, however, come within the grants in some cases.

The total length of railways in Bolivia is 1,100 miles, with about 300 miles in construction and 2,000 miles surveyed or projected (1921).

The railway from Arica to La Paz, which has recently been concluded, is a work of considerable interest. It was constructed at the cost of the Chilean government, under agreement with Bolivia, the contract having been given to an English firm for the sum of £2,750,000. The line is a metre gauge with heavy gradients, twenty miles of which are worked as a rack-rail. The railway leaves the arid plains of the Pacific coast and enters the Lluta valley, where alfalfa, maize, melons and other products of the warm lands are grown under irrigation ; crosses the river Lluta several times in its course, and ascends the arid *quebradas* or ravines which conduct it up the slopes of the Andes through precipitous and broken territory, from which the line emerges upon the high Andean plateau, at an elevation of 12,500 feet above sea level. Thence along the plateau and crossing profound gorges, the line reaches the picturesque region in view of the high, snow-clad peaks of Bolivia, which flank

the way on either hand; among them the volcanoes, Tacora and Chupiquina, whose sulphur deposits form the basis of a business of sulphur export. Beyond this point the summit of the line is reached, 13,976 feet elevation, and the rails pass along the shores of the strange borax lake of Laguna Blanca. Crossing the Bolivia frontier, the line descends to the valleys of the streams, which run into the Desaguadero river. One of these, the Mauri, is a large stream running for twenty-five miles through a deep gorge, whose high, precipitous cliffs and slopes are covered with the terraces and tombs of the bygone populations of the Inca and pre-Inca period; clans which must have been numerous. The Indian villages which are then passed are the homes of the native breeders of the llamas and alpacas, thousands of which exist upon the plains. The river Desaguadero is crossed by a bridge 330 feet long, near the old Indian suspension bridge. The Desaguadero river is a remarkable stream, draining lake Titicaca into its sister lake Poopo, the two main bodies of water of the Titicaca basin, as before described. The river is as wide as the Thames at Windsor, running with a full flow of water, at an elevation of 12,000 feet above sea level and without an outlet beyond the lake, for the waters of the curious hydrographic system of Titicaca have no overflow, and are spent only by evaporation. The railway passes the mining district of Corocoro, follows the river Colorado, crosses the flat plain of Viacha and joins the Oruro-Antofagasta line, and thence runs to the edge of the steep valley of La Paz. The views upon the route are striking, and the magnificent Cordillera Blanca extends for 150 miles in a range of snow-clad peaks, including the high uplifts of Illimani and Sorata.

The amount of British capital invested in Bolivia is over £3,500,000, of which about £2,000,000 is in the tin mines. The Bolivia Railway Company holds about £3,750,000 for railway construction, but some of the bonds are held by Americans. The Antofagasta railway represents about £800,000, and the Guaqui-La Paz about £400,000. Of French capital about £4,000,000 is invested, mainly in the zinc and silver mines, electric lighting, railway, and other

works at La Paz, and in loans. The total amount of German capital is about £1,000,000; and the American about £500,000. The Bolivian loan of 1908 floated in New York has been acquired by the Bolivian national bank. There is also a good deal of Chilean money in the country. British capital leads, and British trade accounts for 20 per cent. of the imports. It is considered, however, that British trade is losing ground.

The exports of Bolivia, if not of great amount, are interesting in character, and the following list shews their variety and extent for the year 1917.

	Metric Tons.
Tin	46,430
Copper	37,444
Bismuth	535
Wolframite	3,891
Lead ore	4,118
Zinc	427
Antimony	23,381
	Bolivianos
Silver uncoined	5,693,640
Silver coin	328,270
Gold ore	——
Gold coin	1,250
	Tons
Rubber	5,843
Coca	363
Hides	979
Quinine	218
Wool	158
Wool, alpaca	127
Coffee	34
	Bolivianos
Leather goods	76,900

The total exports for 1918 were valued at £14,600,000, and imports £2,750,000; the exports exceeding those of any year. To the United Kingdom went 27,203 tons of tin, and to the United States 18,189 tons. The main bulk of the rubber went to the last-named, and nearly all the copper. Of the imports, 12 per cent. came from the U.K., and 33 per cent. from the U.S., with 24 per cent. from Chile. The value of the exports for 1919 was Bs. 144,251,000, and the imports Bs. 61,998,000. The principal imports are iron, steel, machinery, textiles and coal.

The financial standing of the republic is good, with assets of Bs. 67,000,000 and liabilities 64,000,000.

The position occupied by Bolivia in the heart of South America, although the state is deprived of any littoral possessions, is one of considerable commercial and international importance, as the country lies in contact with several of the most progressive republics of the continent. The extending network of railways, building or projected, will place the capital in communication with its neighbours, and will lead to considerable commercial and social advantage; and the backwardness due to isolation will tend to disappear. The greatest need for Bolivia, as for the neighbouring countries, is the upraising of her lower classes, by education and better treatment, both economically and socially; and the encouraging of foreign capital and immigration under such conditions as will be conducive to the real welfare of the community as a whole. It is shewn that the natural resources of Bolivia are very considerable, and the range of climatic and topographical conditions, which to-day seem almost an obstacle to development, should in the future prove to be among the most valuable assets of the country. It is manifestly difficult to bring about the upraising of a large Indian population, but much can be made of the native intelligence of these people if the task be entered upon by the ruling classes in a spirit of national co-operation, such as the world is everywhere demanding from its governing element. The home industries of these upland people should be encouraged, not simply replaced by the establishing of great mills of a dividend-yielding nature to home or domestic capitalists. The arts of spinning and weaving, inherited both from the Incas and from the Jesuit teachers in early times, are cleverly carried on in the cottages, the women being specially expert, and it would be a grave economic error to uproot the system. A considerable inducement for foreigners is in the still cheap, unsettled areas of land; property such as in Argentina has long since been taken up and risen in value.

CHAPTER X

THE REPUBLICS OF THE ANDES—CHILE

The republic of Chile is somewhat smaller territorially than its neighbours of Peru and Bolivia, but it is far more progressive as a nation; its people are more energetic and enterprising, and they have advanced for themselves the claim of being the "British" or the "Americans" of South America. It might be a matter for surprise that a country of so remarkable a form as is the republic—nearly 3,000 miles long, with an average width of about 180 miles; a ribbon-strip of territory compassing the tropics at one end and the Antarctic at the other; from the torrid Capricorn to the frozen Horn; washed by the sea on the one hand and shut off from the rest of the continent by the Andean barrier on the other—could retain any homogenity as a nation. But notwithstanding its curious physical configuration, Chile is more united perhaps than any other Latin American country, none of which are pervaded by a more binding patriotic sentiment. The national sentiment regarding the natural boundaries within which the country lives and strives to progress is embodied in the national anthem of Chile: "That God-given bulwark, the snowy Cordillera; that tranquil sea, the highway of thy future splendour!" This sentiment, however, cannot banish the difficulties which confront the Chilean republic in its development, due to the disposition of the national territory, and grave problems of its economy and governance still await solution.

The area of Chile is variously computed between 293,000 and 307,700 square miles; and the population numbers (1922) about 4,000,000 people. From Arica—the province disputed with Peru—to the southern extremity of Tierra del

Fuego, or Cape Horn, the country is 2,700 miles long, with a greatest width of 228 miles and a least of sixty miles. To the north is Peru, to the east Bolivia, and across the snowy summits, Argentina and its territory of Patagonia.

In respect of climate and products, Chile may be described in four longitudinal regions. The northernmost of these extends from the Peruvian boundary to Coquimbo; an arid belt of territory intersected by some cultivable valleys, and containing the Sahara-like deserts of Tarapacá, Atacama, and Antofagasta. These, although desert as regards vegetation, contain the well-known nitrate or saltpetre deposits, or "Salitreras"; and the "Oficinas"—or establishments which produce and export the nitrate—familiar at least by name to the British shareholder. The chief ports forming the outlet to the region, such as Iquique, Antofagasta, and others, are generally more or less open roadsteads on a surf-beat shore, rather than sheltered havens. The difference between the climate of the western and eastern coasts of South America is nowhere more strikingly shewn than in the fact that the arid, lifeless region contained between Iquique upon the tropic of Capricorn and Antofagasta; a region approximately 250 miles long; corresponds with the rich coffee-producing state of São Paulo on the Brazilian side, and Rio de Janeiro. The second division is that which embodies the principal industrial, commercial, and habitable region of Chile; which includes the beautiful and fertile vale of Chile, and the fine cities of Santiago, the capital of the republic, and Valparaiso, the principal seaport. The pastoral and agricultural portion, the Central region, follows, and south of this lies the forest section, extending almost as far as the straits of Magellan: a stretch of territory 900 miles long. Lastly, is the cold zone of the far southerly region, including Tierra del Fuego and the Chilean portion of Patagonia; terminating in the Beagle channel and Cape Horn. This last named region is by no means unproductive, being in part an excellent field for stock-raising, and containing numerous gold placer mines; both of which sources of industry account for the

comparative prosperity enjoyed by the town of Punta Arenas, the most southerly port in the world.

The desert interior of northern Chile is arid, appalling in its aridity, yet vast, spacious, grand with a certain lifeless beauty such as deserts possess. Access is gained to the high pampas upon which lie the great nitrate beds by the short railway lines, which with difficulty climb the cliffs and ravines of the coast from the narrow littoral, served by the nitrate seaports; and thence desert trails enter upon the barren expanses leading to the mining valleys of the Andes, rising grey and serrated on the horizon. From sunrise to sunset the wearied traveller and his mule follow these trails, parched by the blazing sun, in some cases unrelieved by any oasis, in others entering dry river valleys where an occasional well is the only water supply, and a cluster of adobe huts and stunted trees offers the only refreshment to the eyes. In times of flood, however, these parched canyons are converted into roaring torrents which sweep all before them, floods hundreds of feet wide, which flow down for miles and are lost in the deserts below. Still higher the rocky base of the Andes is ascended, leading to bleak plateaux and mighty precipices, where the condor and the vicuña are the only inhabitants. Nature in the mineral world has staged strange scenes, and inserted treasures in strange places in this region. Great beds of gravel conglomerate, and other formations impregnated with the salts of copper, sometimes in beautiful crystals, are exposed, and great lodes of copper and silver ores, intersecting hills worn smooth by glaciers long since retreated, bleak altitudes where the incautious traveller suffers the agonies of the *soroche*, and the puny dwelling of the miner on the hill slopes is nightly shaken by the *temblor*, or earthquake. Singular rock-basins, holding lakes of water covered by wiry mountain mosses mark the heads of valleys, carved out by glaciers—"glacier meadows" forming the drinking places of the vicuña and the deer; and far beyond and above rise the glorious snowy cones of Andean volcanoes, majestic against the blue of the sky, which mark the frontiers of Bolivia. Over all reigns the

glamour of the solitude, the inscrutable voice of the desert, the untranslatable music of the mountains.

The central region of Chile is of a very different character. It is a land of a temperate climate and rainfall, with soft pleasing valleys, of pasture and cattle, vineyards and fields, and the lower mountain slopes display a smiling landscape, where the rocks are clothed with verdure and flowers, and hedgerows are gay with white and red roses; the land watered by the plentiful streams proceeding from the cascades of the Andes. Still further to the south are the fiords and forests of the lower part of the continent, a topography similar in part to that of British Colombia, in the north of the sister continent, where the geological changes and subsidences of the terminii of the great coast ranges have had like effects. This region is subject to rigorous climate.

The hydrographic system of Chile is relatively simple: the rivers all flowing to the sea from the Cordillera, except in the broken extremity of the continent, where lakes and channels of intricate character exist. Only a few of the rivers are navigable, their aggregate navigable length being about 700 miles. The rivers in the desert regions are swallowed up in the sands in most cases, and do not reach the coast, but their waterless channels are of interest as shewing that different hydrographic conditions formerly existed in that vast region. One of the main Chilean rivers of the north is the Loa, which receives a large volume of water from the Cordillera and from its upper courses, where, untainted by mineral salts, it supplies water which is taken across the desert in iron pipes to some of the coast towns. The Copiapo river is practically exhausted for purposes of irrigation before reaching the sea. The waters of the Coquimbo, the Limari, the Aconcagua and others are also used for irrigation, over a considerable area. The rivers of the central agricultural province are much more valuable, and have been of great service in developing the agricultural regions of Central Chile, having served as means of transport where there was neither railway nor highway. The most important is the Bio-Bio, elsewhere mentioned; but ten or more are navigable. The rivers of the unsettled southern regions

are not all explored. In the far south the peculiar network of fiords and connecting channels covers an extensive area. A peculiar feature of the extremity of Chile is the large number of glaciers on the western and southern slopes of the Cordillera, which discharge into the deep estuaries of these singular waterways; and the formation of these icy streams at comparatively low levels, with a discharge into tide water is a marked phenomenon. Here the glaciers terminate in the sea.

The climate and temperature of Chile varies greatly, from tropical dry heat in the north, to the coldness and humidity of the extreme south: and there are also vertical zones of temperature, as in Peru: but extremes are less marked than under similar latitudes in the northern hemisphere, due to the greater juxtaposition of the sea; and the Humbolt current, as in Peru, modifies the heat of the arid areas. At Copiapo, in lat. 27°, the mean annual temperature is 60°, and the rainfall one inch; at Santiago, in lat. 33°, it is 54°, with 16½ inches of rainfall. Palms grow naturally as far south as 37°, and the vegetation even south of Talca has a subtropical aspect; and irrigation is necessary, due to the long dry season. The climate is healthy and agreeable, and if the death rate is high, it is due to the mode of life of the working classes. At Valdivia, lat. 40°, the mean annual temperature is 53° and the annual rainfall 108 inches—an equable climate which extends to Ancud. In the south the conditions become extreme.

The republic of Chile is divided into twenty-three provinces and one territory, whose capital towns, areas, and approximate populations in 1922 are:

Provinces	Sq. Miles	Pop.	Capital	Pop.
Tacna ..	9,251	32,000	Tacna	12,000
Tarapacá ..	10,131	126,000	Iquique	50,000
Antofagasta	46,611	128,000	Antofagasta	37,000
Atacma ..	30,729	86,000	Copiapo	14,000
Coquimbo ..	13,461	229,000	La Serena	28,000
Aconcagua	5,487	154,000	San Felipe	12,000
Valparaiso ..	1,953	331,000	Valparaiso	206,000
Santiago ..	5,665	562,000	Santiago	400,000
O'Higgins ..	2,342	106,000	Rancagua	6,000
Colchagua ..	3,856	218,000	San Fernando	11,000
Curico ..	2,978	146,000	Curico	20,000

Provinces	Sq. Miles	Pop.	Capital	Pop.
Talca ..	3,840	170,000	Talca	43,000
Linares ..	3,942	142,000	Linares	12,000
Maule ..	2,475	167,000	Cauquenes	11,000
Nuble ..	3,407	215,000	Chillan	48,000
Concepcion ..	3,252	248,000	Concepcion	63,000
Arauco ..	2,458	83,000	Lebú	3,000
Bio-Bio ..	5,246	136,000	Los Angeles	22,000
Malleco ..	2,973	125,000	Angol	9,000
Cautin ..	5,832	159,000	Temuco	19,000
Valdivia ..	8,649	125,000	Valdivia	19,000
Llanquihue ..	45,515	120,000	Puerto Montt	6,000
Chiloe ..	8,593	112,000	Ancud	5,000
Magallanes ..	71,127	20,000	Punta Arenas	12,000

For purposes of industrial enumeration in the Chilean census the country has been divided into six sections: the nitrate with 320,000 population, mining with 300,000, the central with 1,169,000, the agricultural with 1,349,000, the Araucanian with 602,000, and the Antarctic with 241,000. Otherwise the population is distributed in a form conducive to a fair circulation of national life. Tacna, in the extreme north, has more than 12,000 people, and Punta Arenas, in the extreme south, about 12,000. In the nitrate region Iquique has 50,000 inhabitants, and Antofagasta 37,000, which is almost the population of their respective provinces, due to the desert character and the consequent concentration of people in the cities. Valparaiso, the chief seaport and the commercial capital of the republic, has 206,000 inhabitants, and there are nine other towns in the country with more than 20,000 inhabitants each. Concepcion lies equidistant from the northern and southern extremities of the country, forming its geographical centre.

The government of Chile is wisely preserved as a centralised republic or " unitary " system, in which the system of federation has been avoided. In a country of such vast longitudinal extent, wherein political conditions would perforce have to be made to co-ordinate with climatic zones, the federal system as enjoyed by Mexico or Brazil could scarcely be conducive to national solidarity. The powers of governing are vested in the three distinct branches of Legislative, Executive, and Judicial ; as in the other Latin

American republics. The executive consists in the president, who is chosen by electors who themselves are elected by the departments, and a cabinet of six ministers; of interior, foreign affairs, worship and colonisation, justice and public instruction, war and marine, finance, industry and public works. The minister of the interior acts as vice-president when necessary. A council of state of twelve members, comprising the president and five appointed by him and six by congress, form part of the machinery of governance. The national congress, or legislative branch of government, contains a senate of thirty-two members and a chamber of ninety-four deputies. The senators are elected by provinces, with office for six years, and one half retiring every three years; and the deputies by proportional representation of one for each 30,000 of the departmental population. As in the usual Latin American constitution, it is set forth that the sovereignty resides in the nation, but suffrage is confined to married citizens over twenty-one and unmarried over twenty-five, who are literate, owners of real estate or invested capital, of a stated amount; and as 70 per cent. of the population is enumerated as illiterate, and the greater part landless and poor or earning a very low wage, the sovereignty of the people is held by a small minority—conditions such as are general in Latin America and not peculiar to Chile. The judicial power is independent of the executive, consisting in a supreme court of justice of seven members in the capital, six courts of appeal in the provinces, and tribunals of first instance in the departments, with justices of the peace in the districts. The jury system does not exist. The higher judges are appointed by the executive. The civil and commercial law are based upon the French code. The twenty-three provinces and territory are sub-divided for the above methods of administration into 75 departments, 855 sub-delegations, and 3,068 districts.

The Chilean people are composed of the three usual South American classes of whites: of earlier Spanish origin; mestizos, formed of the alliance of the early settlers with the aborigines; and the Indians. The mestizos form the bulk of the population, constituting 60 per cent. of the total,

and the people of white extraction 30 to 40 per cent. The Indians of pure race are numbered at about 100,000. The Chileans lay claim to having but a small admixture of aboriginal blood, but whilst there is undoubtedly a far larger proportion of people of European extraction in Chile than in any other Latin American republic except Argentina, the mestizos nevertheless are the principal basis of the population. The Indians are mainly concentrated in the eastern forest region, and are principally the remains of the brave and independent Araucanians who successfully resisted both the Inca and the Spanish advance, and the element they provided in the formation of Chilean nationality has been of the utmost value. Like the Indians of the Andes of Peru and Bolivia, their numbers are now being steadily reduced by drunkenness, the effect of the white man's alcohol, and by disease brought about by the poverty-stricken and unsanitary condition of their life. The principal part of the population of Chile, about 73 per cent. of the inhabitants, is concentrated in the fertile provinces which form the vale of Chile.

The ruling and educated class of Chileans, including the professional and landed element and those engaged in industrial and commercial enterprise, are of energetic and generally shrewd character. In their business operations they are more advanced than their neighbours of the other Andean republics, and pride themselves, not unjustifiably, on their commercial methods; and joint-stock enterprise and company formation has a considerable vogue in Childean industrial affairs. The educated Chileans possess pleasing characteristics of hospitality and politeness, which almost disarm criticism of their national defects, and they have a marked admiration for those virile qualities of the Anglo-Saxon race, which to some extent they have adopted in their business pursuits and in certain national institutions. Foremost among these is the British-built navy, whose regimen is modelled upon that of England, with certain well-known traditions connecting it therewith. The women of Chile are handsome and vivacious, and display to a marked extent the addiction to society functions,

which does not, however, minimise the love of home which characterises the women of Latin America generally. The Chilean is to a certain extent marked out from the neighbouring people of South America by a somewhat brusque mode of address, and harsher rendering of the Spanish language, yet there is a strong poetic temperament beneath it. Not less hospitable than the Latin American people generally, the Chileans have less of the somewhat superficial urbanity which is the marked characteristic of the Spanish American people. Taken as a whole, the Chileans must be regarded as one of the dominating personalities of the community of South American nations.

Whilst the upper and educated class and the land-holding oligarchies which govern the republic are well advanced in comfort and civilisation, they form but a small minority, and the bulk of the population of Chile, like that of the other Andean republics, is poor and ignorant in the extreme ; and the workers as a class, being landless, badly paid, illiterate, are without voice in the government of the country. One of the principal causes of this backward condition is that of land tenure. The upper classes are the descendants principally of the early Spanish settlers who, when the republic was founded, secured to themselves entire political control and the possession of the land ; the workers being kept in a state of almost hopeless servitude. Since then a species of oligarchy composed of the rich land-owning class rules the country, and the laws formed in the interests of this class and against the lower class have suffered comparatively little modification ; although some improvement in education and the establishment of manufacturing industries, which have been fostered under a high tariff, have benefited the common people to some extent. Yet were it not that the Chilean peons and *rotos* came of an extremely hardy stock, the deprivation of almost all means of advancement in the past, and the low wages paid, would have rendered them much less numerous than at the present time. Their qualities of patience and endurance under poverty and petty oppression, like those of their neighbours, the Peruvian Cholos, are worthy of acknowledgment, and

of a better lot in life. The chief defects of this class are their drunkenness and the sanguinary spirit they display in private or national quarrels. Murder is lightly regarded ; the knife is the most ready argument among them, and the butchery of fallen enemies on the field of battle has been one of the greatest reproaches against their remarkable fighting qualities. Infant mortality is very heavy.

But the Chilean *rotos*, the men of the mining and agricultural and working class generally, have some excellent qualities. As a miner the *roto* has few equals in the world, with his tenacity and absence of fear, his resolution to win in whatever he does, his love of gain in which he does not spare his body, his powers, or his pocket, and his primitive sense of honour—the honour of the bandit at times it may be. He is a good friend and a terrific enemy, fearing nothing, and stopping at nothing, bearing in his veins the blood and valour of his indomitable Araucanian ancestors, the most vigorous and tenacious indigenous race of the whole western hemisphere—which kept back the redoubtable Incas and fought long with the Christians. Furthermore Chile has enjoyed a clean record, and has possessed a beneficial factor from the absence of negro slavery, with very small exceptions, such as in colonial times degraded a part of the population of Brazil, Peru, and other countries, and brought about an undesirable racial conglomeration.

The character of the Chilean people was well shewn in the war of the Pacific, waged against Peru and Bolivia. Thousands of miles from their base, the Chileans nevertheless manned their fleets, fought terrible sea battles, and swarmed over Peru, took from her the nitrate provinces, deprived Bolivia of her only seaboard of Antofagasta, ravaged the coast of Peru, attacked and overcame the first, second, and third lines of defence of Lima—heroically defended by Peruvians, young and old, rich and poor—and kept the Chilean flag flying over the Peruvian capital for several years ; lastly obtaining as their recompense what has proved to be the most valuable indemnity ever paid one nation by another, in the handing over the nitrate provinces.

The reproach of backwardness in literacy the Chileans

are now making endeavours to cast off. The old conservative regimen is giving place to the increasing influence of more liberal ideas, even if the advance in popular education is slow. The increase in urban employment, due to the expansion of industry, is also helping to stimulate a desire for education among the lower classes, and this will doubtless extend to the small towns and rural communities. Education is largely under the control of the government, and from the university down to the smallest and most distant primary school, educational establishments are under the direction of the minister of justice and public works. The university buildings of Santiago form a prominent architectural feature of the capital. The Instituto Nacional is the principal secondary school of the country. There is a total of about 2,500 primary schools, equal to nearly one per 1,500 of the population, of which 1,700 exist in rural districts and the remainder in the towns. Part of the teaching is devoted to instruction in manual labour, and to education in civic matters, and in every grade some hours per week are devoted to religious instruction. Representatives of the church sit on the central committee for education, which works in harmony with the ecclesiastical authorities, and as there is little or no avowed dissent from the national Roman Catholic religion, questions of denominational character are not aroused. Sixteen training colleges are maintained by the state throughout the republic, six for men and ten for women : the course lasting five years, with training, board, lodgings, and books free of cost, carrying, however, the obligation of state service as primary teachers for a minimum period of seven years. In the men's training colleges regular instruction is given in lessons on " Religion and Morality," and in the women's on " Religion." Secondary education is carried on in establishments or lycées in the chief towns, to the number of seventy-five, about equally divided between boys and girls, those for boys being under the direction of the university of Santiago, and those for girls directly administered by the state. There are five classes, or courses, in these institutions, the first of six years, and the second of three years, from which

matriculation for the university is allowable; and thus a path is open from state education to the university career. University teaching is free, and the degree of "doctor" does not exist in Chile, being considered undemocratic. As regards technical education, institutions for such are also provided by the state. There are also six agricultural colleges, ten commercial schools, three mining schools, twenty-nine technical colleges for women, where they are taught all kinds of practical women's work; also a school of art and a conservatoire of music and the drama. English is an obligatory study in most of the men's educational establishments. The English and German schools are also a feature of education in Chile.

It is to be observed that the Chileans, although one of the most virile and military of the Latin American people, are at the same time among the most religious. The Chilean clergy are generally drawn from the higher classes, and are of better intellectual and social standing than in the Latin American states generally. The Roman Catholic religion is by the constitution the religion of the state, and the church, although wealthy, derives a large part of its income from a subsidy included in the national budget; with a Minister of Worship as supervening authority. The higher appointments of the church are also subject to intervention by the Executive. The privilege of religious worship is accorded to other faiths by a law of 1865, with civil marriage and the secularisation of cemeteries. Santiago is the see of an archbishop, and there are three bishops. The Chilean worker and miner is superstitious, like all his brethren of Latin America—superstition largely mixed with religion. A tangible evidence of religious ideas lies in the great bronze statue of El Cristo de los Andes, which was placed upon the snowy pass of the Cordillera at the time of delimiting the Chilean-Argentine frontiers; as an evidence of the value of arbitration, whose successful consummation avoided what doubtless would have been a hard and bloody struggle between the two countries.

Santiago, the capital of Chile, is a name far less familiar to the foreigner than is that of Valparaiso, its seaport; due

largely to its position inland. It is a city of stately and attractive appearance, well laid out, upon a fertile plain overlooked by the snow-clad peaks of the Cordillera; with broad, regular streets, and handsome public buildings, plazas and alamedas: closed in from the sea by a low range of mountains paralleling the coast, forming part of the beautiful vale of Chile, and is reached from Valparaiso by the railway which traverses the rocky and barren coast belt.

The railway, which is 115 miles long, enters the city through one of the finest avenues of any South American capital, the broad Alameda, planted with giant poplars and lined with imposing buildings, three miles in length, adorned with flower gardens, fountains and sculptures, among which are grandiose equestrian statues of San Martin and O'Higgins, the two famous Chilean heroes and liberators. From the centre of the city rises the rocky hill or crag of Santa Lucia, formerly a citadel, but now laid out as a great pleasaunce, with theatres, restaurants and monuments, and winding walks which lead to points where picturesque views of the surroundings are obtained. Seen from this high point, 300 feet above the valley, the city unfolds on both sides of the Mapocho river, with parks and squares which relieve the sameness of the geometrical plan of its construction, and the great Alameda bisects the whole. The Mapocho river, in earlier time the agent of destructive floods, is retained by solid embankments and crossed by handsome bridges. Among the plazas enclosed by the parallelograms formed by the straight streets and those which cross them—in almost too great a uniformity—are the Plaza de Independencia and the Campo de Marte. Upon the former faces the cathedral, which, however, is not of striking exterior effect, although the interior decorations are good. The original building, erected by Valdivia and rebuilt by Mendoza, was destroyed by an earthquake in 1647 and rebuilt in 1748, and is 350 feet long, and 92 feet wide. Among the most noteworthy buildings of the city is the Capitol, with its rows of massive columns, surrounded with beautiful gardens, the Moneda, or executive residence, the municipal Palacio, the courts of justice, the

university. The national library, with more than 100,000 books, the school of arts and trades, or Lyceo, the national conservatory of music, the observatory, national institute, mint, and the theatres are others of the principal edifices which form the handsome grouping of the national capital. The water-supply of Santiago is obtained by an aqueduct five miles long, and the streets are paved with asphalt and traversed by tramway lines. A small plaza and column marks the spot where in 1868 the Jesuits' church was burned down, with 2,000 victims, chiefly women. The city has been the scene of many earthquake shocks and of frequent revolutionary disorders. The present population is over 400,000 inhabitants. Santiago stands at an elevation of more than 1,800 feet above sea level, and to the east and north-east rise the serrated Andes, snow-clad and scarred, appearing as if almost close beyond, their crests gaining an altitude of 17,000 feet. The climate is temperate and healthy, with a moderate rainfall, and its latitude, 33° 26′ south, and elevation insures freedom from the diseases of the more northern coast towns. The Chileans take great pride in their handsome capital, which has never yet been subjected to a siege.

Valparaiso is the most important centre of commercial activity on the whole Pacific coast of South America, ranking next as a seaport to San Francisco, the western capital of the United States. It lies upon a broad, open, semi-circular bay, on the slope of a spur of barren hills forming a rocky peninsula, whose promontory affords good shelter from the westerly and southerly storms. But from the north the bay is open to the gales which at times work serious damage upon the shipping in the harbour, and improvements at heavy cost are being carried out to remedy this condition, such as will make of the port a more desirable haven. The harbour suffers from the disadvantage of many other South American harbours, such as Montevideo and Brazilian and Peruvian ports, in the relative shallowness of the bay, which obliges vessels of large draught to anchor off shore and to discharge by means of boats and lighters. The town is in a singular situation, topographically composed

The Cordillera from Santiago

of a number of hills separated by deep ravines, spanned by numerous bridges, and a narrow strip of level ground on the sea edge, less than half a mile wide. From the lower to the upper portion of the town a number of lifts, stairways, and winding roads ascend, giving access to the higher districts, 1,000 or more feet above the shore. The poetical name of Valparaiso—the Valley of Paradise—was bestowed upon the port by the Spaniard Saavedra, who founded it in 1536; but it was a misnomer, which the barren hills and unpleasing odours of the foreshore and narrow streets sufficiently attest. The town is, nevertheless, not without some pleasing elements, and approached from the sea is of an imposing character, its white buildings standing out upon the shore, and climbing the hills in picturesque form, backed by the mountains. But its principal claim to greatness is in the commercial importance as a great shipping terminus and famous seaport. Valparaiso was captured in 1578 by Drake, and in 1596 by Hawkins, and in 1600 was sacked by the Dutchman van Noort. In 1866 it was bombarded by the Spanish fleet and laid in ruins, and in 1891 was sacked by the Chileans themselves after the repulse of Balmaceda. It suffered greatly from earthquakes in 1730, 1822, 1839, and 1873, and in 1908 it was almost totally destroyed by an earthquake: its public edifices, private residences, water, lighting and transport services all were wrecked, and the population obliged to flee to the plateau above. But with characteristic Chilean energy the town has risen from its ashes, with improved conditions architecturally. The new port works now under construction by a British firm, comprising breakwaters, wharves, railways, custom house, electric cranes and other matters, are being executed at a cost of 33,000,000 Chilean dollars.

To the north of Valparaiso is the handsome seaside resort of Viña del Mar, a place of gardens, hotels, casinos, concerts, and restaurants, and other attributes of holiday life; and Chilean society crowds thither, the men in clothes of London fashion, and the women in Paris modes, graceful and handsome, with the peculiar attractiveness of the women of the western South American coast towns. Aquatic sports,

bathing, boating, piers, bands, and the usual elements of seaside resorts indicate that the pleasures of the Chilean people are upon lines such as are common in Britain, California, or elsewhere.

The mountains are nearer the sea in this part of Chile than in the northern region and in Peru, and the peaks of the snowy Cordillera are seen from the coast. The loftiest peak, Aconcagua, the highest mountain in the New World, reaching 23,097 feet above sea level, is finely beheld from the Chilean Trans-Andean Railway beyond Santiago.

The principal seat of life and agriculture in Chile, and the really typical part of the civilisation of the republic, is in the Vale of Chile, the broad valley or plain extending from the Aconcagua river slightly to the north of Santiago, the capital, to the gulf of Ancud, more than 600 miles long and 60 broad, forming in the main a fertile region of alluvial soil, watered by numerous streams which descend from the Cordillera. This valley is the richest and most thickly populated part of the republic, and embodies an agricultural and pastoral region of great productiveness. The rainfall is moderate, being heaviest in the south, where the plain is covered with forest. This great vale of Chile lies between the maritime Cordillera and the Andes, and extends approximately from latitude 32° to 42° south.

The railway line running southward from Santiago along the valley reaches Valdivia, some 400 miles long, with branch lines to various points upon the coast. This great artery of travel is state owned. The port of Talcahuano is the largest and best protected port on the Pacific coast of South America, lying about mid-way between Santiago and Valdivia and connected therewith by the railway. It is the principal naval station of Chile, and has a large dry dock for the repair of vessels ; and a new naval dry dock to accommodate the largest type of warship is being built, the only one upon the Pacific coast. Concepcion lies seven miles from the port on the Bio-Bio river, the centre of a rich agricultural region, and the town has a population of some 63,000 people. Wheat, wine, wool, cattle, timber, and coal are produced, and it possesses flour mills, carriage and

furniture factories, and breweries. The city is well laid out on level ground, with broad streets and squares, a cathedral and fine churches, and is an episcopal see. Above, the river is navigable for 100 miles and carries considerable traffic, but at the mouth is somewhat obstructed. Another line of railway extends to the south through the coal-fields, crossing the river by a steel viaduct 6,000 feet long. Concepcion has many times been destroyed by earthquakes. It was burned twice in early times by the Araucanians in their long struggle against the Spaniards.

Valdivia is a town of 19,000 inhabitants of a pioneer character, to a large extent German, surrounded by flourishing settlements of the enterprising German colonists. The main industries are tanneries, dried meat factories, breweries and distilleries, and a shipyard for the building of wooden vessels and small steel steamers. Important sources of raw material around Valdivia and the investment of capital have been the factors, added to German immigration, which have developed the town. Grain, hides; and fine timber from the forests are among the sources of industry, which are characteristic of the temperate regions. German colonists were first brought in by the state, and between 1850 and 1870, and since that time, private settlers have arrived is such numbers that German is the principal language spoken, and beer from the German breweries at Valdivia finds a market all over the republic. The railway journey to Santiago occupies about twenty-two hours. Corral, the seat of some extensive ironworks, is a short distance away by steamboat, at the mouth of the river.

The port of Coquimbo lies 200 miles north of Valparaiso, and has one of the best harbours on the coast. It is the outlet for a hinterland of mixed mining and agricultural industries, and famous locally for its wine. One of the oldest Spanish towns, La Serena, lies five miles distant by railway, with a fine cathedral and other buildings such as the Spanish regimen bequeathed, and an attractive plaza where local society congregates, after the Latin American fashion, at evening concerts—matters which impart an atmosphere of distinction and agreeable social life to the place.

Agriculture in Chile possesses certain characteristics of its own. The general aspect of the lands under cultivation differs from that of closely civilised parts of the world, as there are few small areas of ground where agricultural products of various kinds are cultivated, nor does there exist a succession of woods and valleys with isolated patches of green, nor even farms to mark the site of an estate. In the agricultural region of Chile, as in the western portion of the United States, there are rolling plains, covered with wheat and corn, stretching away to the horizon, and in other districts immense pasture lands devoted to the raising of cattle. These lands, whether employed for grazing or for agriculture, are generally crossed by a network of irrigating canals. The system of cultivation, on a large scale, by the landowner himself, the raising of cattle in the open country, and artificial irrigation are the bases of Chilean agriculture. The great extension of the estates or country properties necessarily requires the employment of considerable capital, a large stock of cattle, and a full complement of machinery, buildings, and farm hands. The method of cattle-breeding within walled enclosures, on the one hand, and the character of the water used for irrigation on the other, containing a large percentage of lime, have so far rendered the use of fertilisers unnecessary, while the number of farm hands or field labourers employed has been comparatively small in proportion to the area under cultivation. Thus, Chile is not a land of small cultivation, as is the case in the highlands of Peru and Bolivia. The discarding of old methods in the cultivation of the soil, and introducing modern ideas and implements, has progressed during the last few years, but conservative ideas are hard to conquer, even in the face of modern progress, and although Chilean agriculturists are progressive and often adopt advanced methods of land culture, nevertheless primitive methods are still employed on many *haciendas*. The government, aided by the National Society of Agriculture, endeavour to diffuse information regarding modern methods of cultivation and machinery, and maintain agricultural schools and practical experimental stations in various parts of the country, and the society

holds expositions from time to time, to which the government contribute. The wheat yield is above 25,000,000 bushels annually. Recent estimates place the number of farms in Chile at about 50,000, with an assessed valuation of £75,000,000.

Agricultural industries occupy about half the population of Chile ; the chief products being cereals, alfalfa, vines and fruits. Cattle-raising and its products are mainly absorbed by the home market. Wheat, although grown also in the northern part of the country, yields its best result under the greater rainfall of the south, with a lower temperature ; and somewhat more than a million acres have been brought under cultivation altogether. The principal wheat export is to Great Britain ; the purchases of the neighbouring republics on the Pacific coast, which formerly were supplied by Chile, having fallen off due to their own production. The average yield of Chilean wheat is given as seventeen bushels to the acre, which is consequently superior to that of Argentina. One of the principal articles of diet among the agricultural population is maize, from which also the national drink, the chicha, or maize beer, similar to that of Peru, is made. The Chilean *roto*, especially in the nitrate mines, generally demands wheaten bread, and a sufficiency of meat ; and other articles such as are unheard of among the Latin American working class, as a rule. The wines of Chile have attained a deserved reputation for excellence, and are equal in many respects to those of California. The vine is cultivated from Atacama and Coquimbo to Concepcion, a zone over 1,000 miles long, but the best wines are made in the last-named district. Potatoes, walnuts—largely exported—beans, peas are important products and largely cultivated and consumed. The European apple flourishes excellently in the south, and peaches, apricots, plums, and cherries. Central Chile is a well-favoured region for agriculture, and few of the well-known fruits are not produced ; whilst the irrigated valleys of Coquimbo and Aconcagua furnish supplies of alfalfa, shipped as fodder to the desert provinces. The climate generally of Chile is suitable for cattle-raising, but the industry

cannot compete for purposes of export with the vast industry of the Argentina pampas, lying across the Cordillera to the east. It forms, however, the sole occupation of the people in certain districts. A feature of the Chilean landscape in the more fertile region is the profusion of wild-flowers, with bee-keeping as a resulting industry of some importance ; wild strawberries are found on both sides of the Andes, and the cultivated berries are excellent.

The agricultural products of the Latin American countries are generally of considerable interest, due to their great variety. Chile does not produce fruits of the tropics, except in a very small degree in the north, and consequently the agricultural resources are of the temperate zone. The products include wheat, rye, barley, oats, maize, beans, peas, lentils, potatoes, hemp (seed), alfalfa (seed), clover (seed), tobacco, hemp (fibre), alfalfa, clover, cheese, butter, wax, nuts, figs, dry plums, olives. There were in addition 177,500 beehives in the country, which produced 10,700 quintals of honey ; and of milk 12,000,000 decalitres were produced.* There was a total area of 30,600 hectares of vineyards ($2\frac{1}{2}$ acres) under cultivation, about half of which were irrigated : and an area of 9,600 hectares of fruit-trees.

The pastoral industry of Chile, as a result of better transportation facilities, is being developed, especially in the territory of Magellan, the southernmost political division of the republic. Magellan is an excellent field for stock-raising. It comprises about one-fourth of the total area of Chile, and contains approximately 48,000,000 acres of land. Its present prosperity is due principally to sheep-farming and the working of its gold placer mines. In Tierra del Fuego an English company maintains a flock of a million sheep, and the increase in cattle and horses, etc., is considerable, but much less than the resources of the country warrant. Horse-breeding is profitable. The native horse is descended from Andalusian stock and is hardy and docile, and, it is said, is capable of doing more work with less food and care than the European or American horse. During the last twenty years the native stock has been considerably

* The decalitre is equal to 2·2 gallons.

improved by the introduction of stallions from England, Germany, and France.

One of the greatest needs for the increase of agriculture in Chile is more agricultural labour, and of a better quality. Strong efforts have been made by successive Chilean governments to direct a stream of European immigration into the country, but it cannot be said that this has been very successful. At the present time various inducements are offered for skilled artisans and agriculturists. At one period, in the latter half of last century, large sums of money were spent for that purpose: and on the one hand immigrants were coming in, whilst on the other the native labouring classes were leaving the country in thousands to the neighbouring republics in search of better conditions of life, the emigrants having numbered as many as 30,000 in a single year. Since that time the conditions of labour have improved. In the last census of the foreign element Spaniards and Italians largely predominated, whilst of British, French and German there were about 10,000 of each, with a few thousands of other European nationalities and a small sprinkling of Asiatics. Immigration is highly desirable, but is very small. The difficulties in the way of attracting settlers have been due in large degree to the labour and hardships involved in making homes in the lands set aside for colonisation, which were situated in the inhospitable forestal belt, where to physical difficulties was added that of lack of protection from the lawless elements. The best agricultural land of Chile is in the hands of the ruling families and the Catholic Church, and is not susceptible so far to subdivision. There is no land tax. The most important colonies are the German, which have been successful, and important towns and agricultural industries have been established.

In the regions more suitable for colonisation, however, the government offers agriculturists a free grant of land, with implements and materials for building, and under certain conditions free third and second-class passages to Chile from abroad, and assistance in money, with second-class passage for skilled artisans. At certain ports, such as Talcahuano and Antofagasta, there are free hotels for

immigrants during the first few days of their arrival, and all rights and liberties are guaranteed—conditions which are not without certain attractions and possibilities, but which have fully to be weighed by the intending emigrant.

The great region—the "Farthest South" of the New World—is one of much interest to the explorer, but in the archipelago of Western Patagonia and Chilean Tierra del Fuego the climate is a harsh one. Terrific and almost continuous gales from the west and south-west, incessant deluges of rain, and great cold seem to render colonisation and profitable industry difficult. Nevertheless, on both sides of the straits of Magellan sheep-farming is carried on. The rapid growth of Punta Arenas, the most southerly port in the world, which already contains more than 12,000 inhabitants, drawn from many nationalities, is a proof of the increasing trade and prosperity of the district that it serves. The great lakes and channels which communicate with the Magellan straits are but little known, and the grandeur and wildness of the scenery of these rock-girt solitudes, with their snow-clad mountains, dark forests, and giant glaciers, are impressive. The Patagonian channels, through the labyrinth of islands into which the west coast is broken up, stretch from the entrance of the straits to Puerto Montt through twelve degrees of latitude. Part of the region is inhabited by the moribund race of the Yagans or Boat Indians, upon the Fuegian coast and in the Patagonian channels—the men of which have been described as throwing their women overboard from their canoes in a storm, to lighten the load.

Punta Arenas lies in the famous straits of Magellan, on the route generally taken by steamers as opposed to that of rounding the Horn. The strait is entirely in Chilean territory, whose boundary with Argentina runs east and west, north of almost the whole of Tierra del Fuego. Through the strait, 360 miles long, narrow, twisted and overlooked by snowy mountains, Magellan in 1520 guided his armada; past the land to the south, stark with eternal cold, to which from the many fires observed on shore he gave the name of the Land of Fire—the fires of the Patagonians, the people

of the big feet. From the strait Magellan pushed his way across the great "South Sea," which he named the Pacific—first seen by Balboa at Darien. He would push on even if he and his crew "had to eat the leather of the rigging," as Magellan exclaimed: a prophecy which later was realised, for famine attacked them.

Among the territorial possessions of Chile are the remarkable Easter island and the interesting Juan Fernandez, or Selkirk's islands. The principal island of this latter group is of beautiful aspect, about thirteen miles long and four wide, with a wide valley traversed by streams and surmounted by precipitous volcanic rocks and pinnacles, which contrast with the rich vegetation, the most massive rising to an elevation of 3,225 feet above the sea. There is a fair anchorage at Cumberland bay, and the few inhabitants keep a small number of sheep, cattle, and horses. The island was discovered by the Spanish pilot, whose name it bears, in 1563, and in 1704 Alexander Selkirk was marooned there at his own request, after a quarrel with the *Cinque Porte's* captain; and his adventures are believed to have inspired the great romance of Defoe's "Robinson Crusoe." It was reported that the island had been swamped by the great tidal wave at the time of the Valparaiso earthquake, but this was found to be incorrect. The island lies off the Valparaiso coast. Easter island lies 2,000 miles from the Chilean coast, and has an area of forty-five square miles, with about 100 inhabitants of Polynesian race. In 1863 large numbers of a much greater population of that time were kidnapped by Peru, for work on the guano deposits of the Peruvian coast. The island is famous for its astonishing archæological remains, consisting principally in great stone platforms and colossal images, for whose existence and of whose origin there is no explanation—vast idols which are one of the enigmas of the world. Some of these colossi weigh 250 tons each, and are as much as thirty-five to seventy feet long, with numerous smaller ones. A great row of these images faces a crater lake on the island, and others remain in the quarry in the trachyte formation whence they were cut. The mighty, stony visages of these strange idols and

their half-human trunks have not been identified so far with the features of any living race : and the fanciful theory has been advanced that they were erected by the " wicked giants " before the flood. The great stone houses and platforms are in some cases thirty feet high and 300 feet long, of squared blocks, some of which are six feet long, fitted without mortar, with the roofs formed by overlapping slabs. There are hieroglyphics on some of the interiors, and some resemblance has been traced with the works of the Aymaras of early Peru.*

The principal wealth of Chile, unlike the other Latin American nations, is produced by the mineral industries and exports, of which the nitrate or saltpetre is the most important, its value being greater than all the other industries of the country combined. The mining, smelting, and export of copper, and of copper ores, is also an important branch of Chilean industry : Chile having been formerly the chief producer of copper for the world's market. The principal mines are in the mountain provinces, where valuable copper lodes and deposits are being worked. The output of copper from Chile in 1897 was 22,000 tons, and in 1918 nearly 107,000 tons. Next in order is coal, mined principally in the south, and although not of first-class quality it is a valuable source of fuel. Coal has also been discovered of late at Rio Blanco, in the Aconcagua region. Gold exists in nearly all the Chilean provinces, both in the form of reefs and placer deposits, but the output is not large. Silver represents an equal value ; and borates, manganese, and sulphur are even more important products. Nearly 50,000 labourers are employed in the mineral industries of Chile, half of whom are the employés of the nitrate Oficinas. The first great fortunes made in Chile were won from the mines. It is known that the ores of Chañarcillo alone yielded £6,000,000 from 1832 to 1851, and the output reached £14,000,000 in 1867, when their decadence began, as the lodes easily mined were exhausted. The mine-owners were without the means to continue the working into the second region, which, according to the geological features

* But see the Routledge expedition results of 1914.

of the district, may be still richer in ores than the first. The backward position now occupied by some of the richest mines in Chilé is due to the fact that they have not been explored by properly organised companies.

The nitrate region, and its environment, and the Oficinas or great establishments and general life of the industry are of a unique character, peculiar to Chile. A desert territory, 500 or 600 miles in length between the Andes and the Pacific, constitutes the nitrate region. Studding these deserts are the great Oficinas, active centres of nitrate production, a hundred or more in number, where English overseers dress for dinner, and champagne is freely encountered; and the picturesque but hard-working and turbulent Chilean *roto*, or nitrate-worker—a being *sui-generis*—forms the human background of the industry. These nitrate-producing centres are worked in the main by British capital, and represent in the aggregate an investment of more than £20,000,000 sterling. So far these centres of wealth, from Taltal to Pisagua, have been isolated from each other, except by sea, with short lines of railway descending from the pampas, as the elevated deserts whereon they are situated are termed, to the open roadsteads of the Pacific. The Longitudinal Railway of Chile, under construction, is designed to serve these centres and simultaneously to render strategic service to the region, which has always lain open to attack from the sea, and was lost to Peru from this circumstance. Even the most important of the nitrate ports, such as Iquique, depend practically for their means of subsistence on produce brought in by the steamers, and for their water supply upon pipe-lines from springs many miles distant in the interior.

The method of occurrence of the Chilean nitrate is peculiar. The great nitrate beds lie between the coast range and the Cordillera in the rainless desert, at an elevation of 3,000 to 5,000 feet above sea level, in large basins or depressions. Conflicting theories have been advanced as to the origin of the deposits: the one most generally accepted is that the nitrate beds were the result of the evaporation of sea-water in what were, in earlier times, inland seas, which became

severed and raised from the ocean by volcanic upheavals. Thus the origin of the nitrate may have been in decayed vegetation, seaweed, and animal matter, fish, etc.: the nitrogen contained in which, by a process of nitrification, combined with the soda derived from the salt of the sea. The caliche or native nitrate is rich in iodine, which is commercially a by-product of its treatment; and this might seem to point to the origin in decayed seaweed.

The general aspect of the nitrate-bearing ground is that of a sandy desert, without any appearance on the surface of the mineral values beneath. On excavating this sand a crust of a compact nature is laid bare, and beneath this lies a further mass of sand with stones, salt, and traces of nitrate; and finally, at a total depth of only a few feet from the surface, lies the bed of caliche or nitrate, great flat deposits, white, or sometimes brilliantly stained with various minerals, and of several feet in thickness. This caliche is blasted and mined in open cuts, and transported by light railway or by mules or carts to the Oficinas or refining establishment. The process of purifying the salt is comparatively simple, although a formidable array of tanks, elevators, bins, engines, and boilers constitute the establishment of the Oficina. The material is boiled in great vats, where the various constituent salts are dissolved, and the iodine extracted, and the solution flows through channels to crystallising pans in the sun and lies like heaps of snow or salt in the drying yards, where, after drying, the nitrate is packed in sacks for export. The whole operation of mining and treating nitrate is one of much interest, and one of the most important mineral industries in the world.

The nitrate fields or salitreras, as they are termed, are not inexhaustible. Calculations have been made assigning them various durations of life, from forty to 100 years. Of late, more extensive nitrate beds have been discovered, and doubtless the smaller period given is too low an estimate. A report by Chilean government engineers in 1908 gave a minimum reserve stock for the nitrate grounds—whose total area is calculated in 200,000 square kilometres—of 220,000,000 tons. There are also large deposits of the "ripio,"

as the waste matter from the vats is termed, containing a recoverable proportion of nitrate; for the material has in years past been imperfectly treated, and a large percentage of salts left in the refuse. The pre-war yearly exports of nitrate were about 2,000,000 tons, which it was then calculated might rise to 5,000,000 tons. Upwards of 100 years of life for the nitrate fields may not be an exaggerated estimate, but figures are problematical. The cost of producing the nitrate, including coal, labour, freights, water, administration, which are all expensive matters in the Chilean desert regions, does not always leave a large margin of profit to the producer, although the industry as a whole is a profitable one. The Chilean nitrate worker earns good wages, and demands good food, but it cannot be said that he represents any growing standard of civilisation. His work is hard, his life semi-bestial and illiterate, his dress and habitation primitive, his surroundings dreary, and lacking in amenities which might make for social betterment; and he is a hard drinker, due largely to the arduous nature of the work: but there is some improvement of late. Labour is become more difficult to obtain, and with the opening of new Oficinas is likely to be more expensive.

The very considerable revenue reaped by the government of Chile from nitrate export dues is a source of national wealth that should make for civic improvement. Great public works have been carried out with the wealth thus obtained, public buildings and warships have been built, and other matters and evidences of prosperity are observed which have a direct bearing upon the receipts. But it cannot be said that much benefit accrues to the immediate community that produces this wealth. As shewn, the surroundings of the nitrate workers possess few elements of comfort and progress. It has been stated that between 1880 and 1908, " more than 1,000,000,000 dollars have been produced by the nitrate industry for Chile, but that this enormous sum has in great part been ill-spent. There are neither ships, sanitation works, docks, nor sufficient schools and libraries where they are wanted. Sumptuous public buildings and houses, it is true, have been erected in the

capital, leaving other places without improvements, and where no improvements are effected nitrate revenues only become a source of satisfaction for hungry office-seekers and of benefit to nepotism at the public cost." This criticism was not made from abroad, but by a newspaper of Valparaiso* and although the Press of every country is prone to attack its own national institutions from political and other motives, this is not without a substratum of truth. It is unfortunately the failing of every land to tend to exhaust its natural resources without establishing permanent conditions and institutions for betterment for the workers, who, at the bottom, produce the wealth, as evidenced in a less degree by the coal mining industry of Great Britain or the United States.

Of the many uses of nitrate, that of a fertiliser is the principal, and its application to the ground largely increases the yield of wheat. The use of nitrate by the various countries of the world is shewn below. The Chilean government maintains a Propaganda Agency abroad, and spends upon this work some £40,000 annually, together with sums accruing from a levy on the owners of the salitreras, at the rate of half of one per cent. on their output of nitrate. It remains to be seen if the production of nitrate from the atmosphere is likely in the future to compete seriously with the Chilean product.

The production of nitrate from Chile in 1911 reached 55,550,000 quintals. Of this 20,000,000 quintals went to Great Britain or Continental ports, and more than 2,000,000 direct; 13,500,000 to Germany, and 10,500,000 to the United States. Considerable quantities are taken by other countries, such as France 1,825,000 quintals, Netherlands 2,000,000, Belgium 2,200,000, South Africa, 627,000, Italy 250,000, Hawaii 340,000, Japan 460,000, Mediterranean ports 434,000, Spain 298,000, British Colombia 108,000, Egypt 413,000. The exports to Japan and Egypt increased considerably. The value of the total nitrate export in 1911 was 250,000,000 gold pesos or dollars, the peso being equal to 18d.: and it formed three-quarters of the total export trade, and yielded 70 per cent. of the national revenue.

* *El Mercurio.*

The amount of nitrate actually used in Great Britain is relatively small, being in 1911 only 150,000 tons, and the amount of the import, whose value was £8,700,000, was mainly dispersed elsewhere. In 1921 the export of nitrate had greatly declined from various economic causes, and the article has been almost a drug on the market, with serious loss to producers and the Chilean Government. The total world consumption for 1920 was 1½ million tons. The importance of the industry is shewn by the fact that the twenty-two principal Oficinas have an aggregate capital of £7,500,000: dividends in some cases of 25 and 35 per cent.

The principal nitrate-shipping port of Chile is Iquique, which is also the main commercial centre of the great arid coast region. The amount of the nitrate export for 1911 was 12,350,000 quintals, and from the copper mines of the Province, mainly the Colluahuasi district, copper ores of the amount of 1,500 to 2,500 tons per month were shipped, of a value of 18 to 30 per cent. copper. A small amount of silver is still exported from the old and extensive Huantajaya silver mines, lying behind the towns. The import trade and varied nationalities of the inhabitants of Iquique show the world-wide connections of the town and province of Tarapacá. According to the last census the province contained 1,400 British residents, 700 Germans, 450 French, 820 Spanish, 420 Austrians and Hungarians, 170 Americans, 1,000 Italians, 1,400 Chinese. The value of imported goods from Great Britain largely exceeds that from all other sources, with the United States and Germany following. It is natural that Great Britain should predominate in the trade of Iquique, the trade depending in the main upon the nitrate industry, a large proportion of the capital invested in which—approximately £10,700,000 out of a total of £27,500,000—being British capital. German trade has tended to decline with the port. The most important manufactured articles imported are machinery, of which Great Britain supplied £94,000, the United States £20,000, Belgium £10,500 and Germany £2,000. Naturally the figures for any year are dependent upon the placing of large contracts, and large single items may cause them to vary, but the strong business

and social position occupied by the British in Iquique is reflected naturally in trade, for wherever a British community is established abroad, the importation of British-made goods generally follows.

Various Oficinas in the province have substituted oil for coal as fuel, and large tanks are being erected in Iquique; and the example will probably be followed by the nitrate railways. The oil is of Californian and Peruvian origin.

The completion of the Longitudinal railway will destroy the present isolation of Iquique, which has always been dependent upon steamer traffic for its means of communication and food products, and which must be regarded as a community set in the midst of deserts, drawing its life from one single and exhaustible product. Iquique is not without various pleasing features of social life, however, and among its institutions is the well-known British Club. The other nitrate ports are Pisagua, Junin, Caleta Buena, Tocopilla, Antofagasta, and Taltal.

The coal-mining industry of Chile is of considerable importance, in view of the necessity for sources of fuel, both for railway, steamers, and other industries. The coal deposits of Chile lie in the south, and Coronel and Talcahuano are the ports around which the industry centres, and which give outlet to the coal-producing districts. The Arauco Company, a British enterprise, has greatly improved the port, with docks and breakwaters, for the easier shipment of the coal and wheat supplies of the region, and the company possesses 100 miles of railway line; and in 1912 had an output of about 200,000 tons of coal. The coal mines of Lota and Coronel in this region are the largest in Chile, and of great importance as sources of fuel on the Pacific coast. They belong to a wealthy Chilean company, with a capital of 18,000,000 dollars, whose $100 shares in 1912 were quoted at $170. The town of Lota has some 10,000 inhabitants, and is picturesquely situated, with a good roadstead. The coal mines incline under the sea, and one of the shafts, 1,000 feet deep, has galleries extending for more than 3,000 feet seaward: and years ago a catastrophe was suffered

by an inundation of water. The three principal mines produce an aggregate of more than 1,000,000 tons of coal per annum, consumed in about equal parts by the steamers and the railways. The coal is of moderate quality, but inferior to that of Britain and Australia, to which it stands in the relation of about 120 to 100 tons in value as a combustible. It is, however, cheaper, selling at about 18s. per ton, whilst English or Australian coal in Valparaiso costs up to 60s., the cost of freight being more than the original value of the article. The Lota mines have been producing since 1852. In connection with the coal industry at Lota are smelting works, reducing the ores from the interior at the rate of some 30,000 tons of bars annually.

The first cargo of iron from Chile, which amounted to 40,000 tons, was received in 1912 at Glasgow, and was pronounced superior in quality to Spanish and Swedish irons. Chile was the first country to work the iron industry on anything like a large scale. A syndicate of European capitalists, including the well-known French firm of Creusot, under concession from the government, erected, at the picturesque port of Corral, in Southern Chile, large smelting works, which were capable of turning out both bar iron and manufactured iron goods in quantities sufficient to meet the needs of Chile and a large part of the South American continent : also pig iron. The enterprise closed down in 1911 due to difficulties of labour and material and questions with the government, and the mines were sold in 1913 to the American Steel Company of Bethlehem, Pennsylvania, whose experts pronounced the deposits to be of enormous extent. But recently an arrangement has been made with the German Krupps to develop the industry.

In means of communication Chile, although lacking greatly, is much in advance of the other Andean republics, and has an aggregate length of railway of nearly 4,800 miles. Of this mileage about half is controlled by the state, and about half by private enterprise or public companies. Some 1,600 miles have been under construction on account of the government, or under state guarantee, at a cost of nearly £15,000,000. The working of the Chilean state railways

does not give satisfactory results from a financial point of view, the gross receipts in general being increasingly less than the running expenses, with serious national loss. It is, however, held in Chile that they are worked in the interests of the community and of the industries they serve, but there are proposals to lease them to foreign companies, which would doubtless bring greater benefit financially. These state lines are those which traverse the vale of Chile in the main, as previously described. But the region served by the government lines is the most productive, and promises to become more so in the future, and it might have been thought that, conducted on business lines and with improved service, a profit instead of a loss would result. The main line, from the port of Valparaiso in the north of the region to Osorno in the south, forty-seven miles inland from Puerto Montt, is 709 miles long.

There is a wide variation of gauges in the connecting and isolated railway lines of Chile, the state lines having three different gauges, embodying 1,120 miles of 5 feet 6 inches, 56 miles of 3 feet 6 inches, and 22 miles of metre, or 3 feet 3 inches. In the private or company-owned lines there are as many as seven different gauges, ranging from 2 feet 6 inches to 5 feet 6 inches. The Antofagasta and Bolivia line is of the former very narrow gauge, of 2 feet 6 inches; the Nitrate railway is of the British standard gauge of 4 feet 8½ inches; the Taltal line is 3 feet 6 inches, and the Trans-Andean is one metre gauge, changing at Los Andes to the Valparaiso-Santiago government line of 5 feet 6 inches.

The total capital of the four principal railways of non-state ownership amounts to £14,500,000. These are British enterprises, and include the Antofagasta railway, 769 miles long, the Arauco, 100 miles, the Nitrate railway, 377 miles, serving Iquique and the allied ports and Oficinas, and the Taltal railway, 184 miles. These railways earn in gross receipts an annual sum of several million sterling, with dividends of nine per cent. at times. For 1920, the Antofagasta line earned £2,370,000: total expenses were sixty-eight per cent. Their total mileage is 1,430 miles,

including, however, 300 miles of the Antofagasta railway in Bolivia.

This railway, the Antofagasta and Bolivian line, is an international railway connecting Antofagasta, Mejillares, and Coloso, the Chilean ports, with La Paz, the capital of Bolivia, and with the great mining centre of Potosi and others. The extensive nitrate region of Antofagasta, with twenty or more Oficinas, is traversed, and the irrigated territory of the river Loa, beyond which is the copper mining region of Calama, 7,500 feet above sea level. At 10,000 feet elevation the Loa is crossed by a remarkable steel viaduct, and the snow-capped Cordillera is seen; the San Pedro volcano, with a perpetual wreath of smoke. The highest point reached on the main line is at 223 miles from the coast, at 13,000 feet elevation. Thence the remarkable borax deposits of Cebollar are passed: a solid lake of gleaming mineral salts, the greatest borax deposit in the world, lying 12,200 feet above sea level, and forming a source of profit to the British-owned company which exploits it. The great Bolivian plateau to Oruro which is traversed is the centre of a rich mining district; and the branch line to the copper mines of Colluahuasi is the highest railway in the world, reaching 15,809 feet above sea level, through an extremely bleak and rocky region. The culminating point of the Cordillera is Ollague, a snow-clad mountain rising to 20,000 feet, a giant landmark on the frontier of Bolivia. The railway passes Uyuni, the chief town of the silver mining district, which contains the famous Huanchaca mines, and skirts the shores of Lake Poopo to Oruro; and, continuing along the Desaguadero river, and the Titicaca plateau, reaches La Paz. The total distance by rail from the coast is 720 miles, which is covered in forty-eight hours, the traveller having the advantage of the sleeping car. The railway from Arica to La Paz, which also runs both in Chilean and Bolivian territory, is described in the chapter upon Bolivia. It has been very recently completed and opened for traffic.

The Chilean Trans-Andean railway, and the corresponding line upon the Argentine slope of the Andes, is one of the

greatest engineering accomplishments in the world, in its particular field. From Valparaiso the line reaches Santiago, and ascends the fertile lower slopes and valleys of the Cordillera, reaching the great Cumbre or summit, and perforating the crest with a tunnel at 10,880 feet above sea level, below the Uspallata Pass. This tunnel is 10,450 feet long. Exceedingly heavy work was necessary upon this line, and the narrow gauge system of the mountain section renders transshipment necessary. The total distance of the international route from Valparaiso to Buenos Ayres is 888 miles: the line thus forming a transcontinental route across South America in its narrowing part, and avoiding for the traveller the sea voyage through the straits of Magellan. The heavy snowfall on the Chilean Andes has rendered the line unreliable since its construction. Due to avalanches, floods, and resulting damage, the railway in 1912 was closed from May to October. At one time snow fell unceasingly for many days on the Chilean side, and drifts fifty feet deep were formed: these were the cause of a series of gigantic avalanches, which in one place carried down a rock slide, burying the railway track under 6,000 tons of rock, and completely sweeping it away in others. An exceptionally severe winter was encountered in the temperate regions of South America in 1912, and the possibility is one which is likely to occur periodically: and it has been necessary to build snow-sheds to protect the line. These snow-sheds, which are familiar to the traveller on other mountain railways, are long "tunnels" of timber baulks, of immense strength. There are forty miles of such on the Californian Sierra Nevada railway, and the avalanches, as well as rock slides, pass harmless over these structures. They tend to prevent the enjoyment by the passenger of the magnificent mountain views, however, and in some instances a summer line is conducted around them. On the Chilean line the extension of the snow-sheds has been necessary, and snow ploughs, as used in North America, are being introduced. The great peak of Aconcagua is the most striking landmark beheld from the railway. Financially the Trans-Andean railway has not yet been a success. The cost of

the Chilean section of the line was approximately £1,500,000, upon which the state had guaranteed a 5 per cent. interest, or nearly £75,000 per annum, which was payable since 1910, when the line was completed. But the traffic returns have not nearly reached this sum, nor has international trade developed across the Andes to the extent that was hoped for. Defects in construction and management were alleged. The future may show that with an amalgamation of the two companies which operate the Chilean and Argentine section, and an arrangement with the Buenos Ayres and Pacific Line, better results will be attained.

The Longitudinal railway of Chile, under construction for the government by a British firm of contractors, is designed to traverse the entire country from north to south, effecting a juncture with the railway systems of the republic itself, connecting the various isolated lines, such as those of the Vale of Chile, the Nitrate railways of Iquique, and other coast lines, and the systems which run from the Chilean coast into Bolivia: and thus through communication, upon the completion of the Bolivia-Argentine link at Tupiza, would be effected between the Chilean and Argentine capitals, and—given the joining of the Peruvian Central and Southern railways at Cuzco—with the capital of Peru. Thus the system would form part of the long-proposed Pan-American railway, which is designed to connect North with South America.

One of the valuable purposes of the Longitudinal railway is that, in establishing communication by land between the agricultural southern districts of Chile and the arid northern region, food supplies for the nitrate towns and Oficinas will be readily available, and less dependence placed upon the sea and the difficult harbours of the coast served by the steamers. The line is already constructed in part, and from the Baquedano station on the Antofagasta railway to Quillaga, on the river Loa, a distance of 125 miles, lies one of the richest nitrate regions, in the suffocating desert, at an elevation 3,400 feet above sea level. These nitrate lands belong principally to the state, but large Oficinas are being erected, and towns springing up, and important copper mines

working: places which were formerly too remote from means of transport. The Loa at that point is a mere thread of salt-laden water that has forced its way through the desert from the Cordillera, flowing through a broad, ancient river channel—the channel in a different climatic period possibly of a great river—only a few feet wide and deep. Yet this relatively feeble stream is worth perhaps millions of pounds to the nitrate industry. The value of water in desert regions is almost incalculable, and cannot be realised by the dweller in lands of the temperate zones. The stream furnishes hydraulic power and water supply, tapped by steel pipe lines. The railway crosses the oasis of Quillaga, with its huge carob-trees a hundred years old; a valley a mile broad. Quillaga is an ancient Inca town, and of considerable interest to the archæologist as marking the southerly extent of Inca settlements. An old Sun Temple, ruined, exists, and from the Acropolis petrified corpses have been disinterred, from the character of whose skulls evidence has been adduced in support of the Mongolian origin of the earlier inhabitants. The remains of old smelting furnaces are also encountered, as in other parts of northern Chile. The few inhabitants of the village dwell in the squalid adobe huts, raising small crops of alfalfa and maize and collecting the carob seeds, which are used in making a native drink: and in netting the *camarones* or great fresh-water prawns, which exist in the coast rivers, as described elsewhere: crustacea which command a good price as a table delicacy. This northern section of the Longitudinal railway was to be completed in 1914, at a contracted cost of more than £3,000,000, carrying a government guarantee of 5 per cent. Difficulties of floods, as well as lack of water, and, finally, of the war, have been encountered, and in 1921 a small gap between Arica and Iquique remained incompleted.

As regards through communication upon the Chilean railways, the break of gauge on the existing lines is a serious difficulty, which will involve, until it is remedied, costly transhipment charges.

The sea furnishes, and doubtless always will furnish the chief means of communication for Chile. Yet, notwith-

standing this maritime environment, the nation has not developed a sea-trafficking element, although the navy is famous, and the Chilean sailor, when well led, has proved a good sea fighter. The Chilean native boatmen, moreover, are expert in the management of their craft, fearless and strong. But the steamers of the Chilean line are officered by Europeans principally, and there is little or no national coasting traffic beyond. The navy is essentially British in organisation and regimen, and all the best ships were built in Great Britain. The two countries are strongly linked together by traditions connected with the navy and the history of sea power on the Pacific coast: and in the capital the names of British sea heroes connected with Chilean history are freely to be seen in the nomenclature of streets and monuments. There is a naval school at Valparaiso which is noted for the excellence of its instruction, and the Chileans take great pride in their generally efficient navy, which they regard as one of the greatest of their national institutions. One of the principal sources of wealth of South America—the nitrate fields—was lost to Peru by reason of a lack of sea power; and Chile to-day is open to easy attack from the sea: a matter which is not forgotten by the state.

The manufacturing interests in Chile are of growing importance, as is to be expected of a people whose commercial instincts are relatively strong. A high tariff policy has been forced upon the country by these interests, but they are mainly confined to articles of necessity, foods, beverages, textile fabrics, and clothes, also leatherwork, woodwork, ironware, chemicals, and pottery. Of great mineral and agricultural resources, Chile has not yet had sufficient capital, nor can command sufficient expert labour, necessary for the textile and other manufacturing industries to reach their fuller development. But there are more than 500 large flour mills in the country, part of which are equipped with modern machinery, and in earlier times, before competition grew, flour was one of the principal articles of Chilean export. The coal deposits have made possible the development of various industries in addition

to ore-smelting, and numerous small manufactories have been built, principally in Santiago, Valparaiso, and Copiapo. Leather tanning is an important industry, and boot, shoe, and saddle factories have been established as a result, under a high tariff. There are also foundries and machine shops : and a large number of factories for canning and preserving fruits and vegetables, numerous small factories for textiles, and several large cloth factories, also paper mills. The breweries are generally worked by Germans. Sugar beet production and refining is a further industry ; and furniture and other wood-working factories. Chemicals are also produced, due partly to the growth of the mining industry. There are good opportunities for the investment of capital in the expanding manufacturing industries of Chile, in various fields.

Chile, before its acquisition of the rich nitrate and mining provinces of the north, was one of the poorest of the Latin American countries. During the years of much fiscal prosperity brought about by the growing revenue from the nitrate fields, up to 1906, the country suffered much from financial crises, caused by the stagnation of industries and political disorder, added to the effect of a greatly debased paper currency. In 1895 a law had been passed under which the sterling value of the peso was reduced to 18d., at which rate the outstanding paper money should be converted, and a conversion fund was created for that purpose. To ensure the meeting of its foreign obligations the nitrate and iodine taxes and import duties were collected in gold, and gold and currency accounts were kept separately. In 1898 the financial crisis caused the suspension of specie payments, and forced an issue of additional paper money, which was repeated later, but in 1907 an act fixed a limit to the amount of paper in circulation. The currency of Chile is therefore of two kinds—the gold peso, of 18 English pence, and the fiscal peso, subject to exchange fluctuations. The gold coins are of 5, 10, and 20 peso pieces. The method of treating receipts from loans as revenue and of dividing receipts and expenditures into ordinary and extraordinary classes, and into separate gold and currency accounts, leads

to confusion and discrepancies in the national accounts.

A feature of the Chilean budget has been for many years the excess of expenditure over revenue, with an accumulation of deficits. The budget estimates for 1913 revealed various matters of interest, such as the income derived from nitrate dues—the principal source of wealth—import dues, railways, which belong to the state; the sale of nitrate grounds, and so forth: and in the expenditure the items disbursed for railways, colonisation, education, worship, and other matters, such as are in some respects foreign to European economy. The accounts showed a deficit in currency and a surplus in gold, which, calculated at 65 per cent. premium, theoretically cancelled the deficit, leaving a small balance in favour of the exchequer. The estimated income was $192,800,000 currency, and $103,500,000 gold.

The Chilean exports largely exceed in value that of the imports, for 1920 being nearly double. These last are considered to be much under the requirements of the nation, but high prices, unemployment, and other matters have reduced purchasing power. Before the war Great Britain held first place in the foreign trade, but during the war the United States occupied that place. The general trade of the country has advanced considerably, and there is keen rivalry among the manufacturing nations for it. The following table shews the growth:

Year	Imports	Exports
1913	£25,100,000	£30,100,000
1914	20,232,000	22,476,000
1915	11,491,000	24,561,000
1916	16,689,000	38,519,000
1917	26,600,000	53,400,000
1918	32,706,000	57,272,000
1919	36,100,000	23,772,000
1920	34,100,000	59,300,000

The fluctuations in the paper "peso" have been severe, the exchange falling from 14 pence to 10 pence in 1920 and 7 pence in 1921.

In summing up the general position of Chile, it may be said, as regards the foreign visitor, that the republic is one of those countries which, having great internal riches, a

splendid climate, and many other attractions, is more or less cut off from the Old World on account of its geographical position. Yet the west coast of South America is to-day ripe for commercial enterprise and affords an excellent field for the investment of foreign capital.* There are few countries which contain such diverse conditions of life as is the case in Chile. From the neighbourhood of the Antarctic regions in the south there is every range of climate up to the northern districts, which are well within the tropics. As a result of the extended coast line and owing to the undeveloped state of the country Chile is for all practical purposes a series of separate regions, as communication by land is difficult, where not impossible, and in many cases the various ports are as much isolated as though they were actually cut off from the mainland. This condition will, however, be remedied by the new railways. The three regions—the southern or wet region, the central or temperate region, and the northern or barren region—are those most pointedly characteristic of the country. In the region of the south, given over principally to agricultural pursuits, there appears to be a prospect of great prosperity for this calling, as, with a steady increase in the population and wealth of the north, the demand for meat and vegetables grows in proportion. The townships are small and scattered, but the recent completion of a railway from the capital should do much to open up the southern districts of the republic. In the central region conditions generally are much more advanced, and the two principal cities, Santiago and Valparaiso, are of considerable size and wealth, and Concepcion is a town of some importance. The hotels in Chile are, with few exceptions, uncomfortable, and travelling for pleasure is almost out of the question in most districts, a condition common to nearly all Latin American republics, except for the traveller whose objects are more than those of the mere tourist. Of roads there are none, as the word is understood in Europe, what tracks there are being thick with dust in the summer and muddy slime in the winter. The shops in the large towns are good, but prices make living very expensive, and

* Some of the views expressed here are from the Foreign Office Report.

what may seem a good income is soon swallowed up in the necessaries and comforts which a foreigner must have. The climate of Valparaiso is temperate, but the prevalence of high winds and clouds of dust in the summer, and violent rains in the winter, are discomforts which, however, have the compensations in the inter-season of fine weather, with eight months of sunshine. In winter the town is flooded on frequent occasions, due to choked sewers, but the new drainage works should remedy this condition. Santiago is essentially Chilean, while Valparaiso is cosmopolitan, and the greater number of Europeans remain in the port. The Spanish spoken by the Chileans is of stronger accent than that of their neighbours. English is spoken by almost every Chilean business man, and is the international medium of intercourse. The southern parts of Chile, especially around Santiago and Valparaiso, are infested with bandits, who, by their methods of murder, assault and robbery, make it dangerous to wander off the beaten track or be abroad after dark." * The Chilean army of 9,000 men is efficient, the officers having been trained by Germans; and some of the officers of the navy have served on board British men-of-war. The cruisers perform the duty of patrols up and down the coast, assisting in preventing or quelling the strikes which are common in the northern ports.

The fauna of Chile exhibits a marked absence of animal and bird life. The vegetation is rich in some of the southern parts, but it is nowhere brilliant, and gives the foreigner the impression that something is missing from the natural aspect of a land where there is so much warmth and sunshine. The birds are few, and nearly all of sombre plumage. A few hawks and a species of turkey buzzard are the most noteworthy, and in the solitudes of the Cordillera the condor. Of insects and reptiles there are none particularly characteristic of the country. A ramble in the hills of Central Chile offers, in many respects, similar landscape to that of parts of Britain; but farther afield the traveller cannot venture without special equipment.

The future of Chile is greatly bound up with the better

* Report *ante*.

development of agriculture, the smaller manufacturing industries, and the increase of railways. Figures of imports and exports do not necessarily disclose prosperity for the masses. As has been shown, the land is held, in the main, by large landowners; and the profits from the mineral industries filter down but scantily to the mining labourer. The great bulk of the people are illiterate, and so cannot vote. But with its varied resources and climate, Chile possesses conditions capable of assuring steady economic development, and its people should continue to occupy a dominant position in their particular sphere.

CHAPTER XI

COLOMBIA AND VENEZUELA

The republics of Colombia and Venezuela occupy an exceedingly important position geographically, forming the northern part of the South American continent, facing upon the Carribean sea, or "American Mediterranean." This was the "Spanish Main," the scene of the exploits of the Elizabethan buccaneers, in that heroic age of ocean chivalry which has left among its monuments the great sea-fortress of Cartagena. Across the Caribbean sea and gulf of Mexico lies the United States; and interposing are the Antilles and West Indies islands, under the political control of several European powers, among them Jamaica, occupying a commanding position upon what may prove an important new trade route afforded by the Panama canal. To the east are the South American possessions of the British, Dutch and French nations—the Guyanas; and the British island of Trinidad. Forming the western outlet to this "American Mediterranean" is the Panama canal.

These two northern mountain republics of Colombia and Venezuela, backward as they are politically and economically, embody some of the most valuable areas of South America; rich in natural resources and possibilities of economic development. Colombia possesses the geographical and strategic advantage of a coast line and seaports on both the Atlantic and the Pacific oceans, the Panama isthmus intervening: a condition which may be of much value in the future development of the country, and one which is not enjoyed by any other South American republic.

The principal and most characteristic approach to the interesting republic of Colombia is through the port and city

of Cartagena. From the coast a broad waterway approaches the city, past mangrove-fringed shores, a picturesque fishing village, and groves of feathery coco palms, under a blue and sunny sky. This channel gives access to a narrow waterway through which the steamer is piloted, flanked by the old dismantled forts ; and beyond are seen the walls, towers and domes of the ancient city of Cartagena, upon a long, flat peninsula within a smooth landlocked bay, whose waves lap its very walls, the whole backed by verdure-clad hills. The position of Cartagena is of extreme interest and value. The city was founded in 1533 by Pedro de Heredia, who named it after the Spanish city of Cartagena in Spain, founded by the Phœnicians of Carthage ; and there is some resemblance between the Spanish and the Colombian port, and certain Mediterranean qualities in the environment of the Colombian coast and climate. The massive walls of the fortifications along the sea front, in some places forty feet thick, are remarkable monuments of an earlier age of piracy. The city on every side reposes in an air of antiquity and massive permanence, such as often characterises the Spanish-colonial type of building in Spanish American cities, but which is especially marked in Cartagena. The aspect of old-world dignity which marks the streets and buildings is a legacy of its mediæval associations and importance : the city having been the only one outside the viceregal seats of Lima and Mexico which possessed a tribunal of the Holy Office of the Inquisition: which Office exercised certain functions designed to prevent the entrance of foreigners into the Spanish American possessions, and conserved for Cartagena its peculiar attributes. The lofty walls of the city overtop in places the low houses within them, and their summit forms a terrace promenade, beside the ancient fortifications which command the approach from the sea. Cartagena needed full protection in olden times. A fine city, the outlet for a rich, productive region, and the storehouse of the gold, emeralds, and silver of New Granada, with its splendid natural position, it was an alluring bait for the corsairs of the Spanish Main. Drake captured it and held it to ransom in 1586, and in 1697

Pointis repeated the exploit : and in 1740 the British admiral Vernon, with a squadron, suffered repulse and disaster before its walls. Cartagena is worthy of a prosperous future, which in the natural course of events it is likely to attain. The harbour is the best on the whole of the northern coast of South America, formed by an indentation of the coast line and enclosed by two long islands, but, due largely to the lack of sanitary arrangements, the city of Cartagena is unhealthy for foreigners, and the better class people have their residences in the hills.

Colombia is by no means entirely a mountainous country ; more than half the area consisting in enormous *llanos*, or plains, lying east and south of the Andes, sloping towards the affluents of the Orinoco and the Amazon. This plains region is 640 miles long and 300 wide, and is covered in part with forest, and elsewhere with grass ; the elevation being from 300 to 500 feet above sea level. A part of this territory is unexplored, and offers an interesting field to the adventurous traveller ; as do the little known waterways of the Guianas, to the east of Venezuela.

The boundary of Colombia with Venezuela is formed by the water-parting of the Magdalena and the Orinoco rivers, and further east and south by the main affluents of the Orinoco. Colombia, occupying the north-west portion of South America, has five boundary neighbours : Ecuador, Panama, Peru, Brazil, and Venezuela ; and with several of these countries there are frontier questions, notwithstanding attempts at arbitration. A portion of the debatable territory indeed is claimed by three republics. The area of Colombia is variously estimated between 466,000 and 482,000 square miles ; which places the country fourth in size among the South American states ; and the population is somewhat under 4,000,000. The coast line upon the Caribbean sea is 1,100 miles long, and upon the Pacific about 400 miles.

Two-fifths of the area of Colombia is taken up by extremely rugged mountainous territory ; constituting the west and north-west part of the country. This region is traversed by three parallel river valleys, running from south to north ;

including the basins of the Magdalena and Cauca rivers, which flow into the Caribbean sea. The mountains of Colombia form the northern terminating ranges of the Andes, and enclose several elevated tablelands ; the higher of which are inclement and stormy *paramos*, as they are termed, a counterpart of the *punas* of Peru and Bolivia. The heavy mists, piercing winds, and swamp-like character of these higher plateaux render them at times almost impassable, notwithstanding that they form the passes of the Cordillera upon the routes of travel between western and eastern Colombia. These cold uplands lie at elevations of 10,000 to nearly 16,000 feet above sea level, and form conspicuous landmarks in the topography of the region. The Andes separate into three ranges north of these plateaux : the Western, Central, and Eastern Cordilleras. The central range culminates in a line of elevated volcanoes, rising in some cases 2,000 and 3,000 feet above the perpetual snow-line, which in that part of the Andes is found at about 15,000 feet above sea level : and this central range divides the valleys of the Cauca and Magdalena rivers, its principal peaks approaching 18,300 feet in altitude. The summit of these great peaks—the " Mesa de Herveo "—consists in an extinct crater, nearly six miles across, presenting the appearance as viewed from Bogotá, the capital of the republic, of a giant table, from whose edge hangs down a gleaming drapery of perpetual snow, more than 3,000 feet deep.

The western Cordillera follows the Pacific coast and disappears into the low chain of hills which form the backbone of Darien and the Isthmus of Panama : its Pacific slopes are wooded and steep, and access to the coast is difficult. The eastern Cordillera is the most important of the mountain system of Colombia : it embodies large areas of elevated valley and tableland lying within the vertical temperate zone, and it is in this region that the white population of the republics is principally found, and that the greatest economic development and civilisation of the republic has been attained, centring in the city of Bogotá.

The remote and famous city of Santa Fé de Bogotá is built upon a broad *sabana* or elevated plain, which forms one

of the largest cultivated mountain plateaux in the world. The soil of this plain is of remarkable fertility, and under more intensive cultivation might yield all the fruits of the temperate zone in abundance : but at present its products are confined to the customary matters of potatoes and cereals, with cattle and dairy produce. The city lies at an elevation of 8,600 feet above sea-level ; and this is slightly more than that of the city of Mexico, which also has an upland environment. Bogotá is a picturesque city ; the Spanish-colonial character is indelibly stamped upon its streets and plazas ; and the large number of churches built by the Spaniards testify to the religious character of its early regimen. Bogotá has a population estimated at about 140,000 inhabitants, formed like that of the other Andean countries, of the small ruling class of Spanish-descended people and the more considerable element of mestizos, shading off into the great mass of Indian population ; and here, as in Quito, Lima, Mexico and elsewhere, Parisian fashions rub shoulders with the sandalled and blanketed Indian, and the Spanish mantilla now gives place to the Parisian hat. The aspect and environment have that peculiarly peaceful and attractive character which many of the Spanish American capitals possess, and the self-centred life of a community typical of such cities is well displayed. Communication with the outside world is not an easy matter for the common citizen of Bogota, due to the difficulties of the road, and traditions cluster and remain as naturally as in any Old World European city. Topographically Bogotá is an example of which there are many in Latin America, of a city lifted above the environment of tropical or sub-tropical latitude by its altitude ; and the condition carries with it certain peculiar charms, and pleasing customs of daily life. The city lies in the heart of the tropics, only 4° north of the equator, and enjoys an equable climate, varying in temperature from 54° to 64°, with a rainfall of 43 inches. The inhabitants of the temperate zones of Spanish America are addicted to describing their climatic environment as forming " veritable sanatoria," and in some cases the description is merited. When the death rate is high, as is generally the case, it is

due to the mode of life of the poor, and when more hygienic conditions of life shall prevail, these mountain towns may indeed become health resorts.

The situation of Bogotá is a pleasing one: the surroundings being well watered by numerous lakes and streams, one of which passes through the city and plunges over the edge of the plateau at Tequendama, in a beautiful cascade nearly 500 feet high. Two high mountains, La Guadalupe and Monserrato, upon whose crests two imposing churches stand, rise from the sloping plain upon which the city is built, and the streets slope downwards from a broad avenue, crossed at right angles by others, forming blocks like great terraces. Handsome plazas, with gardens and statuary, upon which the principal buildings face, are features of the town-planning, as customary in the Latin American type, and streams of cool, fresh water from the mountains run down the sloping streets, wide *acequias* flushing the gutters. The streets as a rule are, however, narrow, but cleaner and better-paved than in many sister cities of the continent, and owing to the frequent earthquake shocks the houses are generally of one storey only, built of adobe, or sun-dried brick, and whitewashed. There are but few imposing public buildings. There are street cars, electric lights and telephones in the city, which is two and a half miles long and one and a half miles wide. The Capitolio, the building occupied by the Legislature, is spacious and handsome; and among its points of historical interest is the marble tablet upon the façade, inscribed in letters of gold, in memory of the British Legion, the English and Irish who aided Bolivar and Colombia to throw off the dominion of Spain a hundred years ago. The number of educational institutions include the university, three endowed colleges, the national academy, the military school, the school of chemistry and mineralogy, the public library with 50,000 volumes; and there is an observatory, museum, mint, and botanical garden. Bogota has jealously guarded a reputation, to a certain extent self-awarded, but not undeserved, and dating from colonial times, for being a centre of learning and literature, and has been called the "Athens of

South America." The Spaniard has always had the poetic faculty within him, and a native love for art and literature to a degree never possessed by the Anglo or Teutonic peoples who emigrate. Natural sciences are always attractive to the upper or leisured class people of Latin America: music and poetry fill an important place in their social life, and to be a " doctor " and a man of letters and leading is the spirit which in Colombia, as among her neighbours, or perhaps more markedly so, controls the higher education. Yet if sentiment runs riot at times it is a good failing. Bogotá has embodied these qualities, and has long been a centre of literary refinement, and still remains so. Yet it cannot be shewn that anything of great value has been produced by this long period of culture. No Latin American man of letters or science of great international fame has yet issued from this mountain city. Its literary and learned attributes are of value to the continent but have not extended much beyond it.

Bogotá was the centre of the Chibchas people before the Conquest, and after its founding by Quesada in 1538 became the capital of the viceroyalty of New Granada, as were Mexico and Lima of New Spain and Peru. The city still remains one of the least accessible in Spanish America, and the geographical situation is not favourable to any extensive industrial development, situated as it is upon a shelf of the Cordillera. Communication with the coast is obtained by a combination of railway and river.

The population of Colombia cannot be definitely enumerated, as there are no estimates of births and deaths of any exact statistical value. The frequent civil wars which have marked the history of the country have resulted in much loss of life among the male population ; and the abandonment of their homes, and the baffling of the authorities by the young men in the desire to escape military service, have rendered the enumeration of the people in census-taking difficult. This evasion of the authorities does not necessarily indicate a lack of patriotism on the part of the inhabitants, but is a natural protest against being impressed into military service by more or less irresponsible revolutionary

factions, and to suffer in causes which are of neither individual nor national value. Due to these conditions, and the poverty of the lower classes, the increase of the population of the country cannot have been more than 1 per cent. since the census of 1871, which gave somewhat under 3,000,000 inhabitants. Of the approximate figure of 4,300,000, assumed as the present population, 10 per cent. are classed as of white race, 40 per cent. mestizos, 15 per cent. Indians, and 35 per cent. negroes and mixtures of negroes with other races, or Zambos, as the result of the miscegenation of the African and the aboriginal is termed in Latin America. The proximity of the Colombian ports to the West Indies, and to Colon and Panama, explains the high percentage of negroes in the republic. The small amount of European immigration accounts for the large mestizo element, and unless changes occur this element it is, as in the case of the other Andean republics, that must in the future dominate the character of the Colombian nation. The white, ruling class of Colombia, like that of Ecuador and Chile, and to a lesser extent of the other mountain republics, is chiefly composed of descendants of the Spanish colonists of early times. They settled in the highlands rather than in the hot and unhealthy coast districts, and the resulting isolation has preserved the characteristics of race, manners, and language of their ancestors in a more marked degree than in any other Latin American country. The upper class of Colombians are a high-spirited and intelligent people, with the virtues and failings of their Iberian ancestors strongly marked. They entertain a high opinion of their own country and character, but are somewhat blind to its defects, and to the backward condition which the discreditable political strife and prolonged misrule has brought about. The poorer middle class suffers considerably from the necessity to keep up appearances in the midst of comparative poverty—a condition common to most Latin American countries.

Nearly all the privileges and power of civic rule and political domination are in the hands of the upper class, but social barriers between them and the mestizo class are not nearly as strong as in Ecuador and Chile. This

upper class has very literally followed out the old Spanish mandate that the white colonist should not engage in manual labour, as being derogatory to the standing of the *caballero*, or gentleman, and they do no labour with their hands; all such work being delegated to the mestizos and Indians. Colombian society is thus very strongly divided into an aristocratic and a serving class. The mestizo people have sturdy, patient qualities which they inherit from the Indian side of their parentage; and as elsewhere in the Andean republics, they constitute the artisan and small shopkeeper class and fill the positions of servants and day labourers, according to their rank and resources. They are more industrious than their class in some of the neighbouring republics, and are growing in numbers more rapidly than any other part of the population, and doubtless will assimilate the other elements in time. There are many educated merchants and successful business men among the mestizo class in Colombia, as well as a professional element, and no obstacle exists to their association with the whites. In the rural districts the mestizos are small farmers, and active in pastoral industries. The Indians, as in Peru, Bolivia, and Chile, are of two classes: the Hispanicised people of the highlands, who follow the Roman Catholic teaching, and who merge into the mestizo race, so forming the usual Latin American type; and the uncivilised Indians, numbering about 120,000. The tribes composing these *infieles* speak some twenty-seven different languages, and they include descendants of the Inca-controlled people of Peru, and of the Aztec races of Mexico; Colombia having possibly formed in the past a meeting point between the two old civilisations of America. The early people of Colombia were partly civilised, and used gold discs as monetary currency. The great Carib stock, the Indians upon the seaboard of the Caribbean sea in Colombia, has some affinity with the tribes of Brazil. Some of the wild tribes refuse to come under the control of the republic, and are still a source of danger to travellers and settlers in certain districts. The negroes are found principally in the hot lowlands of the coast, after the manner of their kind, where tropical

food products cost little; and they are grouped principally in the seaports of Barranquilla and Cartagena.

Notwithstanding the pretensions of Colombia to be a literary centre, 90 per cent. of the population are illiterate. Until recently there were very few schools and colleges and no efficient educational system. This backwardness was due partly to long political disorder, and partly to the apathy and opposition of the church; and except in the larger towns educational facilities were very meagre. The war of 1899-1903 was responsible for the disordered condition of education in large part, as for other serious defects in the social system of the republic, including that of the retrograde condition of agriculture. Bogotá and Medellin possess universities, the former with faculties of philosophy and letters, jurisprudence and political science, natural science and medicines, and mathematics and engineering, but these became disorganised by the war. The educational reform programme, of normal schools for teachers, and agricultural and technical schools for the better development of the resources of the country, is under the control of the minister of instruction. The secondary schools which receive state aid are in charge of religious bodies of the Roman Catholic church. The school and college attendance in 1906 aggregated 219,000, a fourth of whom were in Antioquia, where the white people predominate; 12,800 in the federal districts and Bogotá, where the mestizo element is numerous, and 5,000 in the department of Atlantico, including Barranquilla, where the negro element preponderates. Primary instruction is free, but not compulsory, and has not extended much beyond the large towns.

The influence of the Roman Catholic church with all classes in Colombia is almost unquestioned, and it is largely exercised in educational matters. Unlike those of her sister republics, the constitution of Colombia does not prohibit the exercise of other forms of worship, any such not contrary to Christian morals or the law being permitted. The number of non-Catholics, however, is small, comprising practically only the foreign residents; with a Protestant church at Bogotá. The greater toleration in religious matters

in Colombia has been wrought of long struggles between liberals and churchmen. The church at one time completely lost its influence politically over the government, and was disestablished and its property confiscated and the clergy disenfranchised; but its rights were restored in 1866. The masses of the people, however, had always remained loyal to the church, whose influence among them the liberal upper element could not destroy, for in the Latin American countries generally the hold of the church is strong upon the ignorant classes. But the church learned by experience, and in 1886 the archbishop of Bogotá issued an edict warning priests not to enter into political partisanship. There are ten bishops and eight vicars-general in Colombia, with about 2,200 priests.

Colombia is divided into fifteen departments, a federal district and four territories, which with their areas and population according to the last official estimate were as follows:

Department.	Area.	Population.	Capital.	Population.
	Square miles.			
Antioquia	24,400	750,000	Medillin	60,000
Atlantico	1,080	104,700	Barranquilla	40,000
Bolivar	23,940	250,000	Cartagena	14,000
Boyacá	4,630	350,000	Tunfa	10,000
Cáldas	7,920	150,000	Manizales	20,000
Cauca	26,030	400,000	Popayán	10,000
Cundinamarca	5,060	225,000	Facatativá	12,000
Galán	6,950	300,000	San Gil	15,000
Huila	8,690	150,000	Neiva	10,000
Magdalena	20,460	100,000	Santa Marta	6,000
Nariño	10,040	200,000	Pasto	6,000
Quesada	2,900	300,000	Zipaquira	12,000
Santander	11,970	300,000	Bucarmanga	20,000
Tolima	10,900	200,000	Ibaqué	12,000
Tundama	2,390	300,000	Santa Rosa	6,000
Federal District		200,000	Bogata	120,000
Intendencias (4)	277,620			

The government of Colombia is that of a centralised republic. The government is divided into the three co-ordinated branches of Legislative, Executive, and Judicial, the first embodying the president and a cabinet of six ministers, and the second the senate and chamber of deputies. The senate is composed of forty-eight members, three for each

department, and the arrangement is such that the president practically controls the choice of senators. There are sixty-seven deputies, elected by popular suffrage, on the basis of one representative for each 50,000 of the population. The president, under the Colombian constitution, has exceptional power to deal with all administrative matters, but doubtless these will be modified. The judicial branch consists in the supreme court at Bogotá, and a superior court in each judicial district. The departments are administered by governors, and exercise a restricted local power assisted by a council; and there are municipal councils in the larger towns.

The topographical formation of Colombia has rendered difficult the development of means of communication. High ridges and deep valleys separate the centres of production from each other; and swampy lowlands, often unhealthy, cut off the interior from the Atlantic coast, whilst the Pacific slope is extremely rugged.

The main natural highway of Colombia is that of the Magdalena river, which, with its branches, traverses the best part of the republic, flowing through the great western valleys of the Andes and falling into the Caribbean sea. The lower part of the Magdalena is served by light-draft steel steamers of stern wheel type; and although subject to shallows and obstacles to navigation, and to periodical changes of channel in certain places, the river is navigable for steamers for 560 miles from its mouth, to within a short distance of Honda; and for ninety-three miles above the rapids near to that town; to Giradot, for the railway for Bogotá; and at high water to Neiva, 100 miles beyond. The Cauca river, a branch of the Magdalena, is navigable for two stretches of 200 miles, interrupted by rapids. The upper valley of the Cauca is a fine fertile region, but isolated from the Caribbean sea and the Atlantic by the difficult country cut through by the Cauca river, and its best outlet is to the Pacific seaport of Buenaventura, by means of the railway which has been recently completed. The upper Magdalena serves a rich and important district, containing cocoa plantations and cattle farms; and rubber and coffee

are produced. There are also some deposits of petroleum and asphalt in the region. The principal river port of this elevated region is Giradot, the centre of the coffee-growing district, and this is the terminus of the railway to Bogotá. The river system of the Magdalena is capable of improvement and increased traffic, but the government has failed, so far, to effect this; notwithstanding the commercial development which might follow upon the work. The river dues yield more than £30,000 annually, and the canalisation of the waterway where necessary should be an undertaking commercially profitable, and would tend to avoid the serious losses due to low water periods caused by drought, which of late years have been especially marked.

The Magdalena is the haunt of crocodiles, which live in its muddy waters and upon the shoals and banks in great profusion. Three kinds are specially noted on this river, the *babilla*, not generally more than five feet long, with a short blunt head, numerous teeth and yellow belly, but with a skin worthless commercially: the *caiman de aguja*, or needle-snouted alligator, with greenish back and yellow belly, large teeth of a beautiful white ivory, at times one and a half inches in diameter and five inches long, with a skin half an inch thick and eighty or ninety square feet in area; the reptile measuring twenty-four feet in length, with a girth of two yards; and the *caiman porro*, a thick, short-headed alligator, not over ten feet long, with a pliable skin of commercial value. These two last kinds exist in inexhaustible quantities; as many as 150 have been counted basking in the sun on a single sandy beach, and whatever slaughter of these reptiles be made their extinction seems difficult, as every full-grown female lays, it has been stated, no less than 100 eggs every year. "The popular belief that the parent alligators eat their young probably originated from the fact that the solicitous mother will help the newly born little animals to swim by opening her mouth, so that they can easily climb up on the lower jaw and use the mandible as a diving stand." * There is not a more ferocious and jealous animal in defending its offspring than the female alligator.

* An article in *The Times* South American Supplement.

The idea of attempted extermination even of these repugnant animals seems to demand protest. There are two seasons in the year when Colombian fishermen catch the alligator in quantities on the Magdalena—from December to April and in July and August. During these rainless months the river goes down and with it the adjacent branches and tributaries, draining out the great alluvial plains bordering the main stream on both sides.

The other river systems of Colombia are of much interest hydrographically. The San Juan, which empties into the Pacific coast, carrying a large volume of water due to the heavy rainfall of the western slope of the Andes in Colombia, has, with its tributaries, some 300 miles of navigable channel, with about seven or eight feet of water at the bar. In its upper portion it flows so near the Atrato, a river which discharges on the Caribbean side of the Isthmus of Panama, that, according to a survey made early last century, a canal of 400 yards' length which might be cut between the water-parting of the two rivers, with a depth of only seventy feet, would give through communication by water from the Pacific to the Atlantic side of the continent. Another remarkable stream on the Pacific slope is the Patia, flowing through the Minima gorge, cut down perpendicularly to a depth of 1,676 feet. An affluent of this river is spanned by a natural stone arch, known as the "Incas Bridge." and the two topographical features have been described as one of the wonders of the world. The third system of Colombian rivers is formed by the tributaries of the Orinoco and Amazon ; and some of these are little known, traversing in some cases the most savage and unexplored territory in South America. The chief tributaries of the Orinoco are the Guaviare, the Vichada, and the Meta, described in Venezuela. The latter is navigated by steamers. Of the Amazon system in Colombia the Napo, the Yapura, and the Putumayo are the principal. The last named in its lower district is claimed both by Colombia and Peru, and was the scene of the atrocities connected with rubber-gathering, which so recently aroused the indignation of the civilised world. This river is described elsewhere, as is the Rio

Negro, one of the largest tributaries of the Amazon, which also has its rise in Colombia.

The railways of Colombia consist in short, isolated lines which run inland from coast ports, or connect inland places with the Magdalena river. There is no main system of linked lines joining the coast with the cities of the interior ; and this is due to the topographical formation of the country, which has prevented access to the plateau regions so far. Bogata is connected with the Magdalena at Giradot by a line 105 miles long, which was completed in 1906 ; prior to which the capital had no direct means of communication with the outside world beyond the mountain roads. Around the Honda rapids on the Magdalena, continuing the link of communication, runs a line twenty and a half miles long ; and near the mouth of the river is a line from Calaman to Cartagena, sixty-five miles long, and one from Barranquilla to Puerto Colombia, of seventeen and a half miles. From Puerto Berrio, on the Magdalena, a line partly completed, seventy-eight miles long, runs to Medellin, the second important city of the republic. There are several short lines connecting with the river and the main railways. On the Caribbean coast are two lines : one from Circuta to Villamazon, forty-three and a half miles long, on the Zulia river, running into the gulf of Maracaibo ; and the other the Santa Marta railway, forty-one and a half miles, both serving the banana and coffee-growing districts. On the Pacific coast the only line is that from Cali, the important town of 16,000 inhabitants in the beautiful Cauca valley, upon the river of that name, to Buenaventura, the principal seaport on the Pacific littoral of Colombia. The total length of the Colombian railways is less than 500 miles, but considerable extensions are contemplated ; and concessions have been granted for more than 1,500 miles, principally to British capitalists.

The majority of the population of Colombia are occupied in agriculture and allied industries. Agriculture in Colombia was greatly injured by the civil wars, especially that of 1899 to 1903, when, due to revolutionary conflicts, the able-bodied population lost many workers, who were sacrificed

in those disorders. These fratricidal struggles of Colombian politicians have left their mark upon the republic; such a mark as only time can eradicate.

The principal article of produce is coffee, and this has earned a reputation for good quality; although the prices, as in all coffee-producing countries, are more or less dominated by the Brazilian output. Cotton, sugar, and cocoa are produced on a relatively small scale for home consumption, but lands suitable for their cultivation are extensive, and they might be greatly increased under more prosperous conditions. As regards cotton and sugar manufacture, these are not sufficient for domestic wants. Rum from the sugar-cane is manufactured, and consumed among the Indians and mestizos, largely to their detriment, as in the other Andean countries. Bananas and cocoanuts have been grown for export of recent years, due to the operations of a North American fruit company. All kinds of fruits are grown, although in comparatively small quantities, for home consumption. The variations of temperature due to altitude permit the cultivation of these in almost every species. Cedar, mahogany, fibres, and ivory nuts, or "tagua," are other products of value. Potatoes are a valuable article of native food, and the wild variety of the Colombian highlands is held to be the original of the potato which now is cultivated throughout the world; and which must have been evolved from its wild form by the ancient Incas and others of South America. On the flooded lowlands rice is grown to a small extent, although an article of national consumption. Colombian tobacco is considered almost the equal of the Havana leaf and might be far more extensively cultivated. The augmentation of the agricultural industries, however, depends upon an increase of labour, rather than capital.

It is considered that sugar might be grown, not only to meet the entire local demands, but also to supply the central mills, several of which have been erected recently, and so to grind for export. Refined sugar and German beet sugar are imported in large quantities, notwithstanding very high tariff duties, but they are consumed mainly by the

wealthier classes. A future export product should be in cacao, the chocolate bean. The planters of Colombia have never paid much attention to the cacao crop, notwithstanding the extensive moist lowlands suitable for its cultivation. At times the native product has not been equal to the home demand, which is considerable, and foreign chocolate has been imported. It is stated that there is a wild cacao with small beans, which are very rich in oil, and its exploitation might furnish the basis of a good export trade. Cotton is one of the crops which is still in its infancy, and until recently no systematic cultivation has been attempted. Measures taken by the government to secure scientific growing give good promise of making cotton a leading export crop; but this will take years, and possibly will require colonisation, since labour is not abundant. There is no probability that cotton itself will be manufactured in the country yet, in quantities to supply the home demand.

Cedar, mahogany, and other cabinet woods have been exported for many years, and this trade is not likely to decline, for as yet it cannot be said that the timber resources have been fully exploited. Large forest areas have been left untouched from lack of transport facilities, but where these have been provided, the timber exports should form a leading feature in the foreign trade. The list of fibres which are converted to household uses, and which have a commercial value, is a long one. It includes the *maguey*, and various forms of henequen. In this connection an increase in the shipment of straw hats of a fine quality is becoming noticeable. Among tropical plants, bananas and cocoanuts are the only kinds exported in quantities sufficient to give them a place in the trade returns. A staple export, and a most valuable one, comprises cattle and hides. While there are fine pasture ranges in the interior, and unusually good cattle are raised, the cost of transport makes their exportation impracticable, and the animals which are shipped come from the districts contiguous to the Caribbean, the lower Magdalena, and the Sinu river. But the hides exported are from all sections of the country, and constitute one of the principal sources of income.

The flora of Colombia is rich, and the horticultural world owes most of its beautiful orchids to the deep recesses of the unexplored river and forest regions of the republic; and of Venezuela. In bird, insect, and reptile life, the country is second only to Brazil.

In mineral wealth, Colombia is a richly endowed country. It has been calculated that the republic, including Panama, has produced since the advent of the Spaniards nearly £128,000,000 in gold, and nearly £6,000,000 in silver. Three-quarters of the gold came from the alluvial deposits and placer mines, mainly of the Andean regions; but the gold product of past centuries has mainly been the result of slavery and forced labour, and there was a considerable diminution in the output when slavery was abolished in Colombia. In the mountain ranges of the Cauca and Magdalena rivers there are thousands of square miles of territory containing gold-bearing gravels and reefs. The department of Antioquia possesses various mines in which British and American capital is employed, both in quartz mining and in dredging, and the output of gold for 1911 was 3,000,000 dollars. Many of the gold-bearing streams do not offer conditions for profitable working; and the development of quartz-gold mining depends for commercial success upon means of communication. In the district of Tolima communications in this respect are being improved. Platinum accompanies the gold gravels often, and is regularly exported, and platinum mining is capable of development. Colombia is second to Russia in the world's output of this valuable metal.

The precious metals have been mined in Colombia for centuries; the viceroyalty having ranked with the foremost gold-producing countries of the world. It can hardly be said that the old mines which the Spanish worked have been exhausted, for they still continue to produce, but chiefly in proportion as new machinery and modern methods are employed. There are also the possibilities, always present in a mineral region, of new discoveries; but practical miners prefer to look for immediate returns in mines already known. Improved means of transport are rendering some of

the mines more accessible and profitable. Especially famous are the emerald mines of Colombia, in particular those of Muzo, some miles from Bogotá, the capital. These are controlled absolutely by the state, but have recently been leased to an English syndicate, which agrees to sell at least £250,000 worth of stones each year for twenty years. The fine quality of product is still limited to a few mines, notwithstanding that considerable capital has been expended in working other deposits. The future of the precious metals in Colombia, particularly of gold and silver, is regarded as encouraging. Systematic methods are now employed by groups of capitalists, who make mining a business, and, instead of prospecting at haphazard, they carefully determine their ground and then exploit it fully. Several groups of American and English capitalists are engaged in development work of this kind. In some departments, notably Antioquia, the mineral industry is well established, and some of the gold deposits are of great importance. It is probable that large areas of the Pacific coast of Colombia are formed of gold-bearing alluvium, and with more effective methods new mining centres may be established. In the department of Nariño gold deposits are being profitably worked, but in the central Cordillera region exploration has scarcely yet been commenced. Abundant deposits of coal, iron, copper, lead, and cinnabar are known to exist. A great gold-bearing region is found in the lofty Cordilleras of the Choco and Antioquia provinces, and in the mountain ranges that separate the Cauca and Magdalena rivers. In this area of many thousands of square miles, wherever there is gravel there is gold, and in the mountains, where the rock has been laid bare, veins are found freely. Many hundreds of miles of this territory have not been explored, except by Indians. The Choco placer region contains more gold-bearing territory than California and New Zealand combined, but only practical work can prove whether these great reputed riches can be made of commercial value, or whether they are only for the individual miner.

Possibly in the future the baser metals and minerals will prove a more profitable source of revenue than the precious

metals. The existence of coal in widely separated regions is fully determined. The mineral is found nearly everywhere on the Cordilleras; lignite on the coast, and coking and steam coal in the interior. Deposits have recently been discovered between the Atrato and Loen rivers, and the Colombian coalfields are well situated to take advantage of market facilities, which may become available with the completion of the Panama canal. Little information about the country's coal deposits is available yet; the mines which have been opened having been only superficially worked; but it is considered that they form an asset of great value.

The petroleum deposits of Colombia resemble those of the Texas oilfields. The oil has an asphalte base. Natural petroleum springs are frequent. A concession has been granted for a term of thirty years, and is to be exploited by British capitalists, for the operation of oil-refining works in a specified section of the department of Santander, within an area 100 miles in length by sixty miles in width. The concessionaires agree to invest in one or more refineries, within a period of five years, all the capital which may be necessary for effective working, and during that period the government agrees to admit, duty free, all necessary materials. Iron ores are abundant in the republic, and the departments of Antioquia, Cauca, Tolima, Boyacá, and Cundinamarca contain veins of copper ore. Much of this ore is of high grade, but owing to lack of facilities of transport the deposits, except in rare instances, remain unworked, and the iron ore which exists in the interior does not give promise of early development on a large scale. Where the coal and the ore lie close together the growth of the iron and steel industries in Colombia might be brought about.

As the control of nearly all the railways which are being extended in Colombia is in the hands of British companies, purchases of railway material are made from the United Kingdom. On the lines controlled by the government preference is shown for American locomotives and equipments. From the topographical features of the country, railways in Colombia will, no doubt, require in the future

much bridge material. In machinery and farm implements there is a growing demand. American manufacturers are supplying ploughs and harvesting machinery, and American threshers compete with English ones; but in hoes, adzes, spades, and shovels, the British and German have the bulk of the trade. In sugar machinery also Europe leads, and nearly all the installations for the larger mills come from England, France, and Belgium. Coffee machinery hitherto has mainly come from England; but recently American manufacturers are obtaining a foothold. In the event of success attending the movement to make Colombia a cotton-growing country, a market for cotton ginning and other machinery would be created. The sale of mining machinery is divided between England and the United States. Mines owned by English capitalists generally have their machinery supplied by the United Kingdom; those controlled by Americans exclusively from the United States.

Of the British-controlled enterprises in Colombia some have been prosperous and others unprofitable. The Cartagena Railways Company and the Colombian Navigation Company have had a chequered and difficult financial life. The aggregate capital of these two enterprises is nearly £1,250,000. The Colombian Northern railway has earned net profits since 1908 varying from 112,550 dollars, in Colombian gold currency, to 150,000 dollars. The Colombian National railway has suffered by reason of arrears of payment in a heavy claim against the government.

The financial history of Colombia, like the political past, has been a chequered one. The republic has been known abroad in financial matters unfavourably through repeated defaults in meeting her bonded obligations. As regards the public revenues, these are derived from duties on imported merchandise in the main, and from export duties on national produce and royalties on various matters of home manufacture, and state monopolies. The revenue increases slowly, but an impoverished people cannot yield much to increased taxation. The value of the Colombian imports for the year 1920 was approximately $48,487,000 and the exports $79,029,000, and these shewed a growth over

the previous year. Financial statistics of Colombia are not easily obtained.

THE UNITED STATES OF VENEZUELA

Venezuela, the adjoining and companion republic to Colombia, shares with that country the commanding position overlooking the Caribbean sea. Her coast is the portion of the South American continent nearest both to Europe and the United States, and as her nearest neighbours the republic has both the British and the Dutch colonial empires, in the three Dutch islands of Oruba, Curaçao, and Buen Aire, lying off her principal seaports, and the important British island of Trinidad, facing the natural entrance to the country, the estuary of the Orinoco river. Upon her eastern side lies British Guiana, and Venezuela thus comes more into contact, territorially, with a European element than any other of the Latin American republics. The coast of Venezuela was the first portion of the mainland sighted by Columbus ; and in succession it was, with the great Antilles and the adjacent seas, the theatre of operations of the French, Dutch, and English corsairs of the sixteenth century ; of the famous buccaneers of the Spanish Main, and of the smugglers and slave traders who, in the eighteenth century, set at nought the efforts of the Spanish government to abolish their contraband trade enterprises. Lastly it was under Venezuelan colours that the British Legion under Bolivar was enlisted, which played an important part in the independence of the republics of Venezuela and Colombia. If in her seaports the pirate flag has often flown, the banner of independence has also been conspicuous. Thus history and sea-power have greatly influenced the character and tradition of Venezuela, and the truculent foreign policy of recent times of its dictators has carried on the sequence of her international relations. The land of the Orinoco, Venezuela has further claims to the interest which surrounds her name and territory ; nature has added her attractions to tradition, and the remote tributaries and forests of the great river remain one of the least known fields for the pioneer upon the continent of South America.

On approaching La Guayra, the principal seaport, a bold, high rocky wall appears to rise out of the sea, almost sheer; a granite wall a mile high, cutting off the interior from the coast, and the main entrance to the republic seems forbidding and uninviting; it is in marked contrast with the Colombian shores to the west. Yet, beyond those stern, rocky bulwarks lies one of the most attractive cities of South America, Caracas, hidden in its high valley, in a pocket of the hills, a beautiful situation surrounded by mountain peaks.

The railway from La Guayra to Caracas, ascends this mountain wall of the maritime Andes with a difficult track of heavy gradients, some twenty-four miles in length, and descends to Caracas, which lies at an elevation of 3,000 feet above sea level. Due to its considerable elevation above sea level, the city, though lying in the torrid zone, enjoys a climate which may be described as a "continuous spring," free alike from the cold of a too great elevation above sea level, and the sweltering heat of tropic lowlands. In this respect Caracas is superior to the towns of the Mexican gulf in the United States. The situation of Caracas is singularly beautiful, and the railway may be regarded as one of the scenic lines of the world; passing along the face of the mountain like a creeper against a wall; and from the summit is displayed, far below, the seaport of La Guayra, and the Caribbean sea. The distance from La Guayra to Caracas in a straight line is about seven miles. The town is an old one, having been founded by the Spaniards in 1567 on the site of an Indian village, and in 1819 it was freed from Spanish dominion by the famous Bolivar, whose equestrian statue occupies the centre of the fine plaza bearing his name. This square is paved with mosaics and festooned with electric lights, surrounded by shade trees, and the evening concerts of the military bands attract the populace, after the customary fashion of life in the Latin American cities. Caracas possesses a showy federal capital building, a national theatre, national university, national museum with some famous paintings, and other public institutions of note. With its extreme natural

beauty and the artistic disposition and construction of its streets and buildings, Caracas might be a home of artistry: and its attractive suburbs, with their luxurious gardens, and the fine new boulevard bear out the environment. An electric tramway traverses the city, controlled by British capitalists, and motor cars are freely encountered on the cement-paved streets. Caracas deserves to be more widely known, and to enjoy a greater prosperity.

The area of Venezuela is nearly 600,000 square miles, according to the national claim, but elsewhere is assigned as 394,000 square miles. Upon the eastern side the boundary is with British Guiana; to the south is Brazil, and to the west Colombia. The coast line is far more broken than that of Colombia, and includes the great gulfs of Venezuela and Maracaibo, and the delta of the Orinoco, and other indentations. On an air line the country has a frontage of about 800 miles to the Caribbean sea and Atlantic ocean, but the length of the coast line itself is much greater, being more than 1,800 miles long in the aggregate. The surface of the country is broken into three irregular sections by the mountains, the principal of which are offshoots of the Andes, which traverse it. More than four-fifths of the area of the republic lies within the basin of the Orinoco, the great river flowing into the Atlantic near the eastern extremity of the country. This division embodies the mountains on its northern border, and the great forested territories in the south and south-west. The mountainous area of the north-west and north falls into the second division, and the Guiana highlands into a third. The Andes of Colombia enter Venezuela in the west, and cross the country to the coast; being known as the Sierra Nevada de Merida, whose highest summit is 15,420 feet above sea level. The Maritime Andes stretch east and west along the coast, and the valley between these ranges is the most densely populated part of Venezuela. East and south of this region the country is very thinly populated and almost unknown. It comprises the vast and densely-wooded mountainous area in the south-east and south, and the level plains between the Orinoco and the mountains. These vast *llanos* are in places

a veritable sea of natural grass ; in others wooded ; but in the districts formerly occupied their character has changed somewhat, due to the decline of stock and horse raising. The elevation of these plains is about 400 feet above sea level, and their surface is so uniform and flat that they are inundated in the rainy season to the extent of thousands of square miles, with a network of connecting channels. The region of the delta of the Orinoco, and that of the frontier of British Guiana, is covered with thick forests, and inhabited only by scattered Indian tribes.

The river Orinoco forms the most striking topographical feature of the north-eastern part of the South American continent, and is the third of the vast fluvial systems, following on the Amazon and the River Plata. The Orinoco is, however, of a less commercial value, and less frequented than the great waterway of the Plate, and approximates more to the nature of the Amazon, in that it is still partly unexplored and mysterious, shrouded in forests, and the haunt of the wild men and wild animals of the tropic zones. The imagination of explorers, naturalists, and others has always been captivated by this grand river. Columbus wrote to the Spanish sovereigns that he had discovered one of the great streams flowing from the " Earthly Paradise," and he named two of its sea-entrances the Dragon's Mouth and the Serpent's Mouth, and the great island close upon them he called Trinidad, upon his discovery of it in 1496. After that time other early voyagers explored its many intricate channels, in the quest of El Dorado or for commercial purposes. The Orinoco is approximately 1,500 miles long, to which the Guaviare branch adds several hundreds more. Of the 436 tributaries, four —the Apure, the Arauco, the Meta, and the Guaviare—are rivers of the first rank, and twenty-five of the second, and the great volume of waters enters the Atlantic through thirty-six mouths, of which six are broad channels. No accurate map, however, exists of this great delta, which opens fan-shaped to the sea. The Orinoco is navigable for large steamers of stern-wheel type throughout the year to Ciudad Bolivar, a town on its right bank, some 375 miles

from the mouth, at which the whole trade of the river centres: a place of some 12,000 inhabitants. This town enjoys a steamship service with the British possession of Trinidad. Above Ciudad Bolivar navigation is confined to small craft throughout the year, such as canoes; but during the rainy season, from June to November, larger craft can travel up the main stream and thence up the Apure, an affluent coming from the west, formed by two great rivers, the Uribante and Savare, from whose confluence the length of the Apure is 645 miles; and for which a doubtful claim has been made that 560 miles are navigable. Through the vast cattle plains or *llanos* the Apure runs past the town of San Fernando, and is navigable in a very variable manner beyond and to the west. The term "navigable" upon the affluents of the Orinoco, as upon the lesser tributaries of the Amazon, must be taken with a certain reservation, as navigation consists at times in forcing a canoe through shallow waters which are only deep enough to float it in the rainy season, by laborious stages, among rocks, shoals, rapids, and logs, under the exertions of expert Indian boatmen. The fall of the Orinoco in the dry season is so considerable that, in conjunction with the bar at its mouth and the shoals in tide water, its value as a great navigable waterway is lessened. The difference between high and low water reaches at times as much as fifty feet. The fall or slope of the river, however, is slight, and the lower reaches of the Meta, 900 miles from the Atlantic, are but little above sea level, and it is probable that the river may prove susceptible to canalisation, dredging, and other improvements for navigation, whenever its future shall warrant the outlay necessary for so large a project.

The Meta, a large affluent of the Orinoco, is formed from the union of two Andean streams, the Negro and Humadea, which rise near Bogota, at whose junction, 700 feet above sea level, the stream is 1,000 feet wide and seven feet deep in the dry season, rising to thirty feet at flood times. It is navigable to about 150 miles from its mouth, although launches, in the wet season, may ascend for 500 miles to the juncture of the Negro with the Humadea. In the dry

season it is much obstructed by shoals and logs, and there are savage tribes of Indians along its banks. Eighty miles above the confluence of the Meta, the Orinoco navigation is blocked by the Atures and the Maipures cataracts, several miles of disordered rocks and swirling foam, with a total fall for the last-named of forty feet. Above the cataracts the upper Orinoco is again a full-flowing stream, fed by the two large tributaries, the Vichada and the Guaviare, coming from the west. The Guaviare is navigable for 300 miles by river steamer, but the upper portion is obstructed by rapids and falls. The banks are covered with forest, and the waters infested by numerous alligators of so ferocious a nature, that it has been stated, they have attacked canoes. One of its tributaries, the Ariari, from the north-west, is navigable for large boats. At the Maipures cataract the Orinoco breaks through a granite spur of the highlands of Guiana. At its confluence with the Meta it is a mile wide, and at that of the Apure two miles wide in the dry season and seven miles in flood time, narrowing at the "Angostura," or narrows, to 800 feet, with a rise and fall of fifty and at times sixty feet.

Above the Guaviare confluence the upper Orinoco divides, the principal affluent from the Guiana highland, the Ventuari, being one of its tributaries, and both traverse little-known, mysterious regions, uninhabited except by Indians. Still higher up the Orinoco is encountered the confluence of one of the most remarkable waterways in the world: a natural canal—the Casiquiare—which actually connects the hydrographic system of the Orinoco with that of the Amazon, the "canal" entering the Rio Negro, the important tributary near whose confluence with the Amazon Manaos is situated. The Orinoco during the year 1912 was at the lowest level on record, by reason of a long, dry season, added, it is stated, to the fact that more water is finding its way to the south through the Casiquiare "canal," to the Amazon. The banks of the channels through the intricate maze of swamps and watercourses forming the delta of the Orinoco, are a long, continuous screen of dense tropical foliage, and little life is seen, especially in the rainy season, when, due to flood waters, the sloping verge is covered.

Not even an alligator appears, but here and there a scarlet ibis, an eagle or heron or smaller water bird breaks the monotony of the long, green, silent desert waterway. An Indian hut, miserable and ruinous, appears at wide intervals, for the Carib Indians of the region are of a low type; and an occasional canoe pushes out with provisions for sale or barter. The Orinoco during the rainy season overflows its banks and floods the tangled jungle far away on either hand, driving back all animal life to the higher ground. The jungle is almost impenetrable, and the traveller lost therein may perish of starvation in the midst of the most lavish arboreal wealth.

The Arauco is a further important tributary of the Orinoco, paralleling the Apure on the north, navigable for large boats and barges up to the base of the Andes. It overflows into numerous caños, or channels, in flood times. This stream rises in the Oriental Andes of Colombia.

The basin of the Orinoco is computed as covering approximately an area of 370,000 square miles, by far the greater part of which belongs to the republic of Venezuela, and forms a valuable heritage for the country. At present, however, it yields a very small national return. The possibilities of the great cattle lands are adversely affected to some extent by the overflow of the river, when the cattle are obliged to retire to the limited pastures above high-water line, to subsist until the river subsides, leaving behind it a fresh vegetation. The dry season follows, often turning the plains into an arid waste by prolonged drought. Similar conditions affect agriculture and tillage in these flooded areas. The exports from Ciudad Bolivar, the commercial centre of the Orinoco, for the last year, were valued at £950,000, of which rubber supplied £608,000, hides £118,000, gold £74,000, feathers £67,000, and cattle £40,000. These articles are all forestal or plains products of an uncultivated kind, and dependent upon nature to a large extent. A customs house has recently been established nearer the sea than that of Ciudad Bolivar, and the iron mines being worked at Imataca on the southern shore of the estuary have created some small movement of industry.

When this enormous torrent of water from the Andes and the Guianas shall have been taken in hand scientifically, it will perform for Venezuela part of such service as the Nile performs for Egypt, instead of being, as it is in large part, an engine of destruction and waste. No more alluring field for the work of the engineer and settler exists than in these vast and little-known regions of the basin of the Orinoco.

The climate of Venezuela, except where influenced by the elevation of the country, is a tropical one, as the southernmost part of the republic reaches within a few miles of the equator. The climate is modified on the coast by the trade winds, but at La Guayra, the principal seaport, the mean annual temperature is 85° F., whilst at Caracas it is about 62°. Thus the day temperature on the coast and the southern lowlands is hot, the average being lowered by the cooler nights. The climate in general may be regarded as healthy, except where the ocean winds do not penetrate; and in some districts malarias and dangerous fevers prevail.

Venezuela is one of the most sparsely populated of the South American republics. The number of the population is largely based on estimates, which vary somewhat, and at present this cannot exceed 3,000,000, comprising about 10 per cent. of a white race, of Spanish descent principally, and 70 per cent. of mestizos, the remainder being made up of Indians, negroes, and the resident foreigners of various nationalities. The country has probably the highest percentage of mestizos of any South American state, a result of early colonising activities.

The government of Venezuela is that of a federal republic, unlike most of the neighbouring countries, which have in general the centralised constitution. The states are independent and self-governing, according to the constitution, but this is nominal rather than actual in its working. The Executive, Legislative, and Judicial branches of government are more or less similar to those of the other republics of South America, the legislative power being—legally—vested in the National Congress of Senate and Chamber of Deputies: the former comprising forty members, two from each state,

elected by the state legislature; and the latter of members elected by direct vote in the proportion of one representative for every 35,000 of the population. The president, two vice-presidents, and the cabinet of seven ministers constitute the executive power, which, in Venezuela, permits the exercise of almost absolute authority. The Judiciary consists in the supreme or federal court and subordinate tribunals, the Federal court being also a Corte de Casacion, or Appeal. The laws of Venezuela are well codified both as to law and procedure, for all departments of justice, as regards their theoretical disposition. The state governments, constitutionally autonomous, comprise legislative assemblies, composed of deputies elected by ballot. The states are subdivided into districts and municipalities, over each of which stands a *jeje politico*. Venezuela is thus constitutionally a federated republic, but republican principles have, in practice, been little exercised. The history of the country records that no single president has ever attained office through election, or left it without the accompaniment of a revolution.

The Venezuelans, like the Colombians, are very backward in national education, and in both republics this is partly due to the apathy or antagonism of the Church. The great majority of the people are illiterate, not by reason of lack of educational laws, which are in theory good, and education is free and nominally compulsory, but schools and teachers are insufficient. The public regards education with indifference, and the ruling classes take little interest in the advancement of the mestizo and Indian classes. Schools under the influence of the Church are the most numerous, but the Church is opposed to municipal schools. There are two universities, at Carácas and Merida, and thirty-three national colleges. In 1908 there were only 1,150 public schools, with about 36,000 pupils, and a number of parochial schools. The university at Merida, is known as the Universidad de los Andes. The Carácas university was founded in early colonial times, and has had many prominent Venezuelans under its teaching. The national college corresponds to the lyceum and high school of other countries.

There are law, medical, and engineering schools in the country, but little is heard of them. The episcopal schools are good, especially the one at Carácas; and in addition to these, normal, polytechnic, mining, and agricultural schools are maintained, the last at Carácas, containing a good library and museum. There are several mechanics' schools—Artes y Oficios—in the larger cities, with a number of private schools. The national library, with about 50,000 volumes, national museum, with a valuable historical collection, the observatory, devoted to astronomical and meteorological work, and the Academy and National Academy of History are other educational institutions.

The religion of the state is the Roman Catholic, but freedom of worship is legally guaranteed. The president, however, has the power to refuse admission to foreigners into the country who are engaged in special religious work, if this does not meet with his approval. In practice no other form of worship exists in the country than that of the Roman Catholic Church; and persons of other denominations hold their services in inconspicuous chapels or private apartments in the larger cities, where considerable numbers of foreigners reside. The state contributes to the support of the Church, builds its churches and provides for the salaries of its clergy. The state, however, has the power to approve or reject all ecclesiastical appointments and the execution of all decrees of the Roman See.

The pastoral and agricultural industries of the country are those which form the chief occupation of the people, and the source of the national wealth of Venezuela. The country is generally fertile, but irrigation is necessary, especially during the long, dry season, upon the great plains. In the coastal region, however, the rainfall is sufficient for cultivation without artificial irrigation. The great river system of the Orinoco, whose tributaries cross the Venezuelan prairies in all directions, and the streams descending from the highlands, offer unlimited scope for water storage and supply, little of which is utilised. On the high tablelands the forage of native grass might be augmented by sowing alfalfa, so forming more adequate feeding-grounds for

stock. A departed industry upon the *llanos* was in the immense herds of horses and cattle. In colonial times the great plains were well populated with live-stock, and the Llaneros, or hardy race of horsemen of Venezuela, were among the most expert in the world, and formed some of the best fighting material in South America : but they were so much drawn upon and reduced in the War of Independence and in subsequent civil conflict, that both they and their herds have nearly disappeared. The plains of Venezuela might have been an important source of food-supply, in meat export for the world's markets, under more favourable circumstances. Some cattle and hides are exported, and goats and swine bred in the region.

The chief agricultural industry and product of Venezuela is in coffee growing. It is estimated that there are 33,000 coffee estates in the republic, containing 250,000,000 trees, the best quality of berry being known as the Maracaibo coffee, which is produced near the Colombian border—and partly in Colombia—and on the slopes of the Cordillera up to an elevation of 3,000 feet. The yield per tree is less than that of São Paulo in Brazil. The value of the coffee export has reached several million sterling. Following upon coffee, the cultivation and export of cacao, or chocolate, is an important industry, engaged in which there are about 5,000 estates. Sugar-cane is successfully cultivated, and sugar manufactured, mainly with old-fashioned appliances. In the Maracaibo district there are millions of acres of lands which are considered suitable for cotton-growing, of the best possible character, with a climate adapted to the development of the plant as appropriate as the climate of the southern states of the United States. Due to lack of labour and other causes, however, cotton-growing is not regarded with favour by the native planters, who make money more easily with other products. Maize and beans are largely grown and are the staple food of the working-class people of Venezuela. Wheat is produced in the highlands, but not in excess of the home demand. A great variety of fruits and vegetables is produced, and almost every kind of fruit could be cultivated in the tropical and the temperate regions. Agri-

culture in Venezuela has been greatly prejudiced by military disturbances, but is capable of a very extended development.

Of forest products there are many, and they furnish regular industrial occupations; including woods, fibres, cocoanuts and rubber. The Hevea rubber-trees are first met with on the Orinoco on Raton island above Maipures, a district above the rapids of Atures, at which point navigation by river steamer ends. San Fernando de Atabapo is the principal trading centre of the district, where the rubber gatherers ship their rubber to Ciudad Bolivar, the total output amounting at most to 4,000 quintals of rubber and sernamby per annum. In the region of the Casiquiare river, from the confluence of that stream with the Orinoco as far as the junction of the Rio Negro, rubber-trees are fairly plentiful, and the indigenous population larger, but about 3,000 quintals per annum represent the output. Upon other tributaries of the Orinoco rubber forests have been discovered of late and a small production of rubber made, but the region is comparatively little known.

The copper and gold mines of Venezuela are a source of some industry and wealth to the country. Gold is most plentiful in the eastern part of the country, near the border of British Guiana, and El Callao mine in that region yielded gold, from 1871 to 1890, calculated at a value of $1\frac{1}{3}$ million ounces. The principal copper mines belong to an English company, and their output, from 1878 to 1891, was valued at £2,750,000 sterling. Coal, iron, sulphur, mercury, petroleum and asphalt are other mineral products of the country; and pearl-fishing has been an ancient and famous industry of the Venezuelan coast and islands. In the mining of iron ore some development has taken place in the Imataca mountains, on the delta of the Orinoco, where mines are being worked by a Canadian company, and the ores shipped to Philadelphia. Extensive deposits of good iron ore exist, it is stated, along the river, and the Imataca Ore Company has installed extensive appliances, and some thousands of tons of mineral have been exported, the enterprise giving

occupation to some hundreds of native and foreign workmen. The ore averages, it is stated, 67 per cent. of iron, and an estimate of a possible output of 1,000,000 tons a year has been made: to be shipped in steamers of a special design such as will convey a maximum freight across the Orinoco bar. At Maracaibo considerable interest has been displayed in the mineral deposits of the district, and on the river Guasare, in the Guajira peninsula, coal deposits are being explored. It has been affirmed that a large quantity of coal is available, but that the difficulty lies in means of transport to tide water. In the region of Lake Maracaibo exploration has been undertaken for petroleum, and it is stated that there are several petroleum deposits in the district. Oozings of petroleum, covering a considerable territory, are found in the district of Mara, near the river Limon asphalt lake. Oil has been found at Bella Vista, near the city of Maracaibo, and exploration work is being carried out, the object being to refine the product and to supply the local demand for illuminating and lubricating oils. Evidence of the existence of petroleum deposits is found over a large area in the district of Sucre, in conjunction with considerable asphalt deposits. An oilfield on the river Sardinate in Colombia, near the Venezuelan frontier, is being worked at the present time. The oil is refined at the wells and sold in the near-by Colombian cities. The field that appears to be the largest and most conveniently situated is south of lake Maracaibo in the district of Colon, in the state of Zulia.

The region of Maracaibo is one of much importance for Venezuela, and the city is a distributing point for one of the richest districts in the northern part of South America. It is situated on the west shore of the broad channel which connects Lake Maracaibo with the gulf of Venezuela, and has a population of some 60,000 inhabitants. The city is provided with tramways and electric lights and other modern conveniences, but, as too often the case in such communities, the water supply and general sanitary system are inadequate. The principal buildings are those of the state and municipal legislatures, and as Maracaibo was in earlier times one of the principal educational centres of South America, institu-

tions connected with education are of some importance. But the principal activity of the city is commercial.

The relatively few manufactures of Venezuela are produced under the customary South American system of high protective tariffs, aided by official concessions and favours, embodying in the main local industries and articles of everyday consumption. Several hydro-electric power and light stations have been installed upon the rivers, and some activity is being displayed in Maracaibo in the establishment of sugar and cotton mills, and the extension of roads and railways to the rich agricultural districts.

The navigable waterways of Venezuela, as before described, furnish valuable means of communication which are capable of much greater development. There are seventy rivers throughout the territory of the republic, having an aggregate navigable length of 6,000 miles, 4,000 of which are represented by the Orinoco and its tributaries. A service of steamboats is maintained on lakes Maracaibo and Valencia, also on the Orinoco and some of the other rivers, but these services are small in comparison with the real capabilities of such important fluvial systems.

The railways of the republic have an aggregate length of less than 500 miles. The best-known line, and one of the few paying a dividend, is the British owned railway from La Guayra to Carácas, twenty-four miles long. A further British line is that from Puerto Cabello to Valencia, thirty-four miles long, with a section having a central cog-rail; and this railway carries a considerable traffic. The longest railway in the county is the German line from Carácas to Valencia, 111 miles in length. Other lines are those from Encontrada, on Lake Maracaibo, inland; that to Trujillo; and that serving the important town of Barquisimeto. For the three British companies; of La Guayra and Carácas, the Puerto Cabello and Valencia, and the Bolivar railways, the total gross receipts for last year amounted to £217,000, an increase of £27,000 on the previous year. Some of these lines have had heavy claims against the government for arrear of guarantees.

The pre-war import trade for the city of Maracaibo had

reached a value of nearly £445,000, of which £100,000 was of British origin, with a slightly larger amount from Germany and £170,000 from the United States. The exports were valued at £950,000, of which £820,000 went to the United States and £7,000 to Great Britain. The imports have fallen somewhat since, the loss having been in British and German trade. The German commercial element has, however, striven to uphold its influence, and keen competition in general results between American and European efforts. In cotton piece-goods, cutlery, wine and liquors Britain does the principal trade, and the United States in arms and ammunition. For manufactures of iron and steel, general hardware, and many of the usual manufactured articles of commerce there is room for trade expansion.

The trade of Venezuela for the year 1911 reached a value of £6,600,300, nearly a million more than the previous year. The value of the imports was £2,850,000, and of the exports £3,750,000, a growth consequent upon a period of domestic peace and a good coffee crop. The imports from the United Kingdom and Colonies amounted to a value of £917,000, or 32 per cent., which included a considerable increase in cotton goods imported: the United States took 26 per cent. and Germany 19 per cent. The United Kingdom is hampered in her trade with Venezuela, however, due to the relatively few British firms established in the country, in comparison with German, French, Spanish, and Italian houses. For 1920, the value of the imports into the Republic was 77,245,000 Bolivares and the exports therefrom 102,660,000 Bolivares.

Venezuela and Colombia must be regarded as regions which, having been kept back greatly in their social and economic development in the past, contain much for a generation that shall know how, equitably and wisely, to profit by the advantages of soil and position which they hold. It may transpire that, with the creation of a greater commercial movement following upon the opening of the Panama canal, the economic value of these countries of the "American Mediterranean" will rise. But it is not merely commercial movement that these countries require. Their

ill-educated and backward lower classes, full of latent possibilities, call for organisation in their interests of the resources of their fatherland, and the putting into real practice of those plans of government and prosperity, of which so far they have enjoyed little more than the theory. The population in general is merely scattered in comparative poverty over a rich region capable of supporting prosperous and enlightened nations.

THE GUIANAS

The purpose of this book being to deal with the independant states of the Latin American mainland, the possessions of foreign powers therein are not within its scope. Nevertheless, the Guianas, forming as they do part of the territory covered, must be given a brief description.

Guiana is the name, in its broadest acceptance, given to that region whose boundary is formed by the water-parting of the streams of the Orinoco and Amazon, and extending southwards towards the main Amazon river, from latitude 8° 40′ N., to 3° 30′ S., lying therefore upon the equator; and from longitude 50° W. to 68° 30′ W., with a long shore line on the north-east coast of South America, from the mouth of the Orinoco to the mouth of the Amazon. This vast territory covers approximately 690,000 square miles, and includes Venezuelan, British, Dutch, French, and Brazilian Guiana. British Guiana, often known as Demerara, is the only British possession in South America, apart from the several islands. The area is estimated at 90,300 square miles, and the population (1910) at 310,000. Of these, less than 5,000 are Europeans other than Portuguese, estimated at about 12,000. About 120,000 are negroes, and 124,000 East Indians, with 30,000 of mixed race, and about 6,000 Aborigines, Arawaks, Caribs, etc., who appear to have decreased considerably of late years. Georgetown, the capital, at the mouth of the Demerara river, has a population of about 50,000. Government consists in an executive power invested in a governor, appointed from Great Britain, with an executive council of five official members, and three unofficial members nominated by the crown; a legislative

authority, or court of Policy, with seven official and eight elected members, and supreme and other courts. The official language is English, and British institutions generally prevail. The revenue and expenditure amount each to about £500,000 annually; the total imports to about £650,000, and exports to about £300,000 per annum. Topographically, four regions are marked, the alluvial sea-board, flat and generally below high water level, the forest belt along the rivers, the inland savannas and elevated treeless tablelands, and the mountain ranges. The main physical features are the rivers, which form a network over the whole territory, and are almost the only highways, except the short coast railway. Vast cataracts exist, and the scenery in places is of great beauty. For a tropical land the climate cannot be regarded as unhealthy, and the malarial fevers are preventable. The vegetation is remarkably luxuriant. Valuable forestal products and tropical fruits abound, and a varied fauna. Sugar and its bye-products, gold, timber, balata, and cattle are the chief exports. Cotton and coffee production, important early in last century, fell off greatly after the emancipation of the slaves. Cultivation of the fertile soil, except as the sugar, coffee, and cocoa estates, is haphazard. A great deal of the land under private ownership is not well occupied, and the vast tracts of crown lands are uncultivated in the main. A land of fine opportunities and great resources, it cannot be said that the development of British Guiana is more advanced than that of its Latin American neighbours. Dutch Guiana or Surinam has an area of about 57,900 square miles, and a population of about 85,000. French Guiana of 51,000 square miles, with a population estimated at 30,000. The physical conditions of these two colonies are very similar to those of the British colony, of coastal lowlands, rivers, forests, savanna and mountains, and their condition of government are of an analogous nature. Of Trinidad, Barbadoes, and other British island possessions, description cannot be entered upon here. They are in some respects revelations to the traveller, of attractive appearance, with advanced towns.

CHAPTER XII

THE UNITED STATES OF MEXICO

Among all the great lands of the New World, upon which Spain set the seal of her language and institutions, none stands out more markedly, or with a more intensive individuality, than Mexico. The name of Mexico carries with it interesting traditions of history and romance, and certain attributes of topographical environment no less chequered and attractive; characteristics such as even the modern age seems as yet incapable of dispersing or overcoming. Whilst the rest of the North American continent, under the hand of the prosaic Anglo-Saxon, keeps its great shops and minds its factories and fields, and is overrun by a democratic people, buying, selling, and creating, the picturesque and quixotic dweller of New Spain fights for his ideals, and asserts the strong and turbulent individualism of his race, whose mastership commerce has not yet been able to subdue.

Mexico is the dividing line between the two civilisations of America, the Anglo-American and the Latin American, and forms a frontier of language, institutions, and ideals. Between these two peoples a small river—the Rio Grande del Norte—dry in summer, is the only boundary; and against it the two civilisations roll together but scarcely mingle. The people of the United States and Canada, and those of Latin America, are as greatly separated in their character and social life as are England and France. The one is prosiac, commercial, solid, mediocre; the other idealistic, autocratic, ephemeral, sentimental; they are, to a certain extent, a foil to each other: neither can dominate the other, but both can teach; and yet where mingling does take place it is the Latin race whose impress is the

stronger, and not the Saxon, as might have been supposed. If the United States and its commercial forces teach their southern neighbours the mechanical arts, these in return tend to force upon the northerners the amenities of commercial and social intercourse, whenever they come into contact. The conversion of the brusque American business man who goes from New York or Chicago to Mexico, to the suavity of the man of the Latin race is one of the most marked social phenomena of the New World. Perhaps in no part of the world are racial frontiers more strongly defined than on the Mexican and United States border; but it is to be recollected that the Anglo-American is, in a sense, an exotic or alien, and the Mexican largely autochthonous or indigenous.

The republic of Mexico, and the lesser republics grouped together and known as Central America, described in the following chapter, enjoy a peculiarly advantageous geographical situation, facing upon both the Atlantic and Pacific oceans; and the latter group forms the geographical link between the two American continents. To the west lies Asia; to the east Europe. The Central American group includes the British colony of Honduras, and forms the western side of the American Mediterranean, which now has its outlet to the Pacific in the Panama canal. Mexico and Central America together cover a very extensive territory: measured upon the Pacific coast, from the boundary of the United States to the mainland of South America below the isthmus of Panama and Darien, this territory is roughly 3,000 miles long, and the total area covered is 975,000 square miles, approximately.

The area of the republic of Mexico alone is 767,000 square miles; it is as large as Great Britain, Germany, France, and Austria-Hungary combined. The total population of the country is estimated at 17,000,000 inhabitants, of which 45 per cent. are mestizos, 40 per cent. Indians, and 15 per cent. are classed as white. As in the case of the other South American republics, the proportion of people of pure white descent cannot be exactly stated, and is subject to exaggeration: but the mestizos tend to increase

and the Indians and whites to be absorbed in the formation of the typical Mexican race, the basis of the normal population, and the nationality understood as "Mexican," which is that of the mixed race. The census of 1900 included 57,000 foreigners, of which 16,000 were Spaniards, 15,000 Americans, and from 4,000 to 2,000 French, English, Germans, Chinese, and Italians. To-day conditions differ.

The surface of Mexico is largely composed of an immense plateau, whose edges on the east and west appear as forming mountain chains when viewed from the coast, either on the Atlantic or Pacific side. This plateau may be regarded as a vast inclined plane sloping upwards from north to south, from an elevation of about 4,000 feet above sea level on the United States border to 8,000 feet at the valley of Mexico. The general form of the country, neglecting the portion south of the Tehuantepec isthmus, is that of a cornucopia: the mountains running approximately parallel with the coast and approaching each other towards the south, and are known as the Eastern and Western Sierra Madre. Below the Great Plateau of Mexico lie the lowlands of the Mexican gulf on the one side, and of the Pacific littoral on the other. South of the isthmus of Tehuantepec lies the singular peninsula of Yucatan, a flat limestone plain, forest-covered; and the state of Chiapas, bordering upon Guatemala and the neighbouring Central American republics. The remaining topographical division of Mexico is the long, narrow peninsula of Lower California, paralleling the Pacific coast in the north.

Mexico is crossed about midway by the tropic of Cancer, and stretching over seventeen parallels of latitude —a territory upon its greatest axis more than 2,000 miles long—is subject to variations of tropical and sub-tropical conditions of climate. The great elevation of the more southerly part of the plateau endows it with a comparatively cool climate, the mornings and evenings in the city of Mexico, in latitude 19° N., being frequently very cool. There is a very marked diurnal range of temperature on the Mexican plateau, due to the altitude, the heat of the mid-day sun being replaced at

night by the cold, rarefied air; and an Arctic touch is experienced in the mountains, some few of whose peaks pass the perpetual snow line: but apart from this condition the heat upon the plateau is considerable, and the lowlands are often hot and humid. In Mexico, as in Central America and the Andean countries of South America, the conditions of climate and temperature are governed by altitude; and the Spaniards on first arriving in this part of the New World distinguished three zones of territory, which they named Tierra Caliente, or hot lands, Tierra Templada, or temperate lands, and Tierra Fria, or cold lands. The first-named lies upon the coasts on both sides of the country; the second embraces the slopes of the great tableland and a portion of the plateau itself; and the third the higher part of the uplands and the mountain ridges which bound or intersect it. All these climatic changes may be experienced within a day's journey in ascending from the coast by the railway from Vera Cruz to the city of Mexico, or that from Tampico. Coffee groves and banana plantations mark the first of the climatic zones, giving place to oak, pine, and wheat as typical products of the higher zone.

Mexico, as regards certain of its attributes, possesses a foremost place among the Latin American nations. It is true that the area of the republic is much less than that of Brazil and Argentina, and that the republic possesses no commercial area of such importance as that embodied by Buenos Ayres and the River Plate, with its vast output of food products, and more modern conditions of life; nor yet any great export trade such as the coffee of Brazil or the nitrate of Chile afford to those countries. But on the other hand, the civilisation of Mexico is an older one, more firmly established and more widely disseminated. The state capitals are more or less populous centres, most of them cities of importance, and well distributed throughout the republic. The city of Mexico has a population of 400,000 people, and following upon the capital are such important cities as Guadalajara on the Pacific slope, with 125,000 people; Puebla on the Mexican gulf slope, with 100,000; Monterey in the north-east, with

MEXICO AND CENTRAL AMERICA (OROGRAPHICAL)

English Miles

0 100 200 300 400 500

Above 10,000 Feet
5,000-10,000 "
2,500-5,000 "
1,000-2,500 "
0-1,000 "
Sea Level

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64,000 ; San Luis Potosi with 62,000 ; Merida, the capital of Yucatan, with 45,000 ; Guanajuato, the famous old mining centre, with 42,000 ; Pachuca, another famous mining town, and Morelia, each with about 38,000 ; Oaxaca, in the south, and Aguascalientes, in the middle region, each with about 36,000 ; Queretaro, the deathplace of Maximilian ; Zacatecas, a famous and handsome mining centre, with Durango and Chihuahua, in the order named, with populations ranging from 34,000 to 31,000 ; Toluca, Saltillo, Colima, Jalapa, ranging from 27,000 to 21,000 ; with eight other state capitals of more than 10,000 inhabitants each. Most of the large cities are situated upon the great plateau or its slopes, but good-sized towns are found in the tropic lowlands. The climate of these cities, with small exception, is healthy ; and in many cases the environment is invigorating and delightful, often hot at mid-day, with cool early mornings and evenings. Nearly all the Mexican towns are on the typical Spanish-colonial town-plan of cross streets, geometrically laid out with central plaza and characteristic style of domestic and church architecture. Their general appearance is pleasing and often distinguished, and they offer a marked contrast with the towns of Anglo-America, in their quaint and non-commercial aspect.

The government of Mexico is described in the constitution as a federation of free and sovereign states, with representative, democratic institutions. Theoretically it is perhaps the foremost example of a Latin American federal republic, but in practice it is a federal republic with centralised executive powers, which have been exercised autocratically and supported by military influence and power. Notwithstanding that the authority of the president is, by the constitution, carefully defined and limited, the executive has been practically supreme. A military despotism of a " benevolent " character formed the government under the rule of Diaz, and there was much excuse for iron-handed methods, in the turbulent character of the revolutionary element, and in the lawlessness, bloodshed, and robbery that existed away from the towns ; not due to the acts of the peaceful peons, who were generally

docile and content to live and let live; but to highwaymen, who earlier infested the roads and made travelling unsafe, and to malcontents and jealous or unoccupied military men, who themselves were desirous of tasting the sweets of office: all people with more or less of Spanish blood in their veins.

The government of Mexico is divided into the three co-ordinate branches of Executive, Legislative, and Judicial, each nominally independent of the other, after the usual Latin-American model. The president, vice-presidents, and cabinet of eight secretaries of state—those of foreign affairs; interior; justice; public instruction and fine arts; communication and public works; fomento, colonisation and industry—form the Executive. The Legislative embodies the congress of two Chambers—senators and deputies; the former of 56 members, two from each state, elected by popular vote for a term of four years, one-half the number retiring every two years; and the latter of popular representatives elected for a term of two years, in the proportion of one to each 40,000 inhabitants. The Judiciary consists in a Supreme Court of Justice, three circuit courts, and thirty-two district courts; the first containing eleven justices, four alternates, a "fiscal" or public prosecutor, and the attorney-general; all of whom are elected by popular vote for a term of six years. All Mexican citizens who are in possession of ordinary or honest means of livelihood possess the vote.

The republic is divided into twenty-seven states, three territories, and the federal district, whose governments are organised on lines similar to the federal government. Each state has its own governor, legislative body, and law courts. The states are subdivided into districts, governed by a *jefe-politico* or prefect, and below this official a municipality.

The states and territories, with their capital cities and approximate populations are:

States	Area Sq. Miles.	Population	Capital
Aguascalientes	2,950	105,000	Aguascalientes
Campeche	18,087	90,000	Campeche
Chiapas	27,222	370,000	Tuxtla Gutierrez

States	Area Sq. Miles	Population	Capital
Chihuahua	87,802	330,000	Chihuahua
Coahuila	63,569	300,000	Saltillo
Colima	2,272	68,000	Colima
Durango	38,009	375,000	Durango
Guanajuato	11,370	1,200,000	Guanajuato
Guerrero	24,996	481,000	Chilpancingo
Hidalgo	8,917	607,000	Pachuca
Jalisco	31,846	1,300,000	Guadalajara
Mexico	9,247	940,000	Toluca
Michoacán	22,874	941,000	Morelia
Morelos	2,773	165,000	Cuernavaca
Neuvo Léon	23,592	330,000	Monterry
Oaxaca	35,382	950,000	Oaxaca
Puebla	12,204	1,200,000	Puebla
Queretaro	3,556	235,000	Queratаro
San Luis Potosi	25,316	560,000	San Luis Potosi
Sinalva	33,671	300,000	Culiacan
Sonora	76,900	223,000	Hermosillo
Tabasco	10,072	162,000	San Juan Bautista
Tamaulipas	32,128	220,000	Ciudad Victoria
Tlaxcala	1,595	175,000	Tlaxcala
Veru Cruz	29,201	985,000	Jalapa
Yucatan	35,203	312,000	Merida
Zacatecas	24,747	465,000	Zacatecas
Distrito Federal	463	550,000	Mexico
Territories:—			
Baja California	58,328	50,000	La Paz
Tepic	11,275	155,000	Tepic
Quintana Roo Islands	1,420		Santa Cruz de Bravo

The Mexican people have shewn marked aptitude for advancement whenever educational facilities have been afforded them. The native Indian races have produced some of the leading men in the history of the republic. The famous president Juarez was a pure-blooded Indian of Oaxaca, a clever lawyer and statesman, and Porfirio Diaz is partly of Indian descent.

The educational laws of Mexico provide for free, compulsory, and non-sectarian primary instruction; and preparatory courses for professional training in the government schools is also free and secular. In 1904 the official report included over 9,000 public schools, about two-thirds of which were maintained by the national and state governments, with about 650,000 pupils, and the remainder by the municipalities; and there were over 2,000 private,

religious, and Association schools, with 136,000 pupils. The national and state schools for secondary instruction numbered thirty-six, and for professional instruction sixty-five, with a number of normal schools for the training of teachers, all maintained at the public expense. The normal and industrial and mechanics' training schools, the latter known as "Artes y Oficios," for both sexes, perform a very important service. The government also maintains schools of law, medicine, agriculture, veterinary practice, commerce, engineering, mining, music and fine arts, and administration. The scientific organisations, including the Geographical Society, Geological Society, Association of Engineers and Architects, Society of Natural History, and others, are valuable national institutions. The old University of Mexico, founded in 1553, with faculties of law and medicine, ceased to exist in 1865, and was succeeded by the professional schools maintained by the government, which have been very successful. The proportion of illiterate people in Mexico, however, is very high, having been in 1895 nearly 85 per cent. This has been reduced since, and education has entered upon a more progressive phase in the republic, and a large number of schools have been erected since that time, some of considerable architectural pretensions. Apart from the great national library in the capital, there are about 150 other public libraries throughout the country, thirty-four museums, and a number of meteorological observatories.

The Mexican people are almost entirely of the Roman Catholic faith, but the constitution permits the exercise of other religions. The census of 1900 shewed 13,500,000 communicants of the Romish church, about 52,000 Protestants, mostly foreigners, 4,000 of other faiths, and nearly 19,000 professing no faith. A considerable number of the Indians are semi-pagan, and worship in secret their ancient gods; whilst such Roman Catholicism as they do profess is often greatly mixed with superstition, a singular medley of ancestral customs and Romish ceremonies resulting. Bands of fanatic Indians are still occasionally to be seen in remote districts, crawling for leagues upon their knees, the way

marked with blood-tracks, towards some Catholic hill-shrine ; but these processions are prohibited by law, as are the weird native religious dances and carousals, although still freely practised in some regions. Toleration of the Protestant faith is sufficiently established, and there are a few churches ; and the times have changed since, half a century ago or less, it was necessary for a foreigner, walking along the streets of the capital at religious feast times, to pretend to mutter a prayer, lest he might be molested. The country is still, however, a stronghold of Catholicism, the most powerful organisation in the country, and the priest an object of veneration : although there is an increasing class of educated Mexicans who have discarded religion—a reaction to materialism such as is noticeable in certain other Latin American republics. The Church has been greatly reformed since the time in 1859, when it owned one-third of the real and personal property of the republic, and was a powerful retrograde and crushing machine. It compassed its own downfall, which Juarez assured. The Inquisition was active in Mexico for two and a half centuries, and in 1574 twenty-one " pestilent Lutherans " were burned alive. This appalling institution of the Old World was suppressed in 1820. At the present time there are three archdioceses : at Mexico, Michoacan and Guadalajara.

The upper-class Mexicans are by nature strongly artistic, musical, and scientific, and the learned professions are freely followed. Doctors of law, medicine, divinity, and science abound, with the same profusion as in Brazil and South America generally ; but the mechanical and practical trades are less attractive, with a consequent dearth of skilled foremen and workers. To belong to the learned professions, to be a " doctor," is a strong ambition of the Mexican upper-class youth ; and the old prejudice that manual work cannot be performed by the *caballero* still holds strongly. Commerce, mainly in the form of the import of foreign articles and the maintaining of large stores on the principal streets, is a source of wealth to the upper class. Modern business establishments of this nature are numerous, and the shops and stores of the city of Mexico

are in some instances the equal of such in European cities. But this form of business is not held to be derogatory to the upper class. The large store or " magasin " is held to be a very different affair to the smaller shop, or " tienda "—a condition not unknown in other lands—and to keep the first does not necessarily involve loss of social standing. Mexicans are generally good men of business, and carry their refinement and courtesy into their counting-houses.

Social distinctions, as elsewhere observed, are very marked in Mexico, and the term " republic " sounds strangely in the ears of the Anglo-Saxon who has associated the term with the chief American republic of the United States. Mexico is a republic little more than in name—yet there is something of the democracy of imperialism and noblesse oblige abroad in the body politic. But wealth is too highly regarded and respected. The clerical and conservative element is still strong, and is both a safeguard and a retrograde force. The old, exclusive race which centred about the viceregal rule, and the empire later, dies hard. The progressive element under Porfirio Diaz flourished for a considerable period, and is still dominant; but during all that time the extreme Church party remained subordinate and protesting; resisting, when it could, the privileges showered upon the foreign capitalist, the railway builders and concessionaires, an element which has been so strongly marked a feature of the development of the country during the past quarter of a century, and from which in part the present revolutionary condition is a reaction. The " era of glorious progress," as the Diaz period was termed at its apogee, has not been unquestioned. It was of great value in certain respects, but failed in the establishment of a Mexican democracy. Peonage and poverty were insufficiently studied by that autocratic regimen.

The Mexicans display the grandiloquent methods in their public oratory and the Press characteristic of the Latin American race generally. The adulation of prominent personages and strong partisanship on political occasions often outweighs the saner side of public affairs; and the control of administrative posts is kept in the hands of the

favoured few. As for the city youth, government clerkships or employment are the most coveted sources of occupation, or, failing that, if influence or standing to secure such are lacking, service behind the counters of the numerous drapery stores is sought; for both the gilded and middle-class youth of Mexico, after the Latin American nature generally, is to a large extent lacking in energy and prone to licentiousness and ease. But towards middle age greater vigour appears in the Mexican character, and more marked commercial or political ability. Furthermore, there is a Mexican element which furnishes able writers, journalists, poets, scientists, lawyers and administrators, and embodies a high standard of merit and enterprise.

The women of Mexico have deservedly been accorded high praise for their good qualities. Among the upper class their refinement, vivacity, and attractive presence lend much distinction to Mexican society, and as wives and mothers these women of the Latin race compare well with any people in the world. The quaint customs, the constant presence and influence of the priest and the Church, the music, flowers, and pleasing surroundings which are elements of their life, conserve feminine traits and qualities, which give to Mexican womanhood an attraction and special atmosphere which changing time does not easily dispel. The influence of the Church, so strong in Mexico, is the Mexican woman's special kingdom. A racial effect of the religion is the general absence of what have been termed neo-Malthusian practices, or "race-suicide." Physically, perhaps, no more attractive type exists in Latin America than these sheltered beings of a leisured class, with their expressive eyes and luxuriant hair and oval type of face. These good qualities are to some extent reflected among the women of humbler classes. They are hard-working and characterised by native modesty, and are generally devout, although their religion is not unmixed with superstition. As regards their appearance the women of the lower classes are often soft and attractive, brown of complexion and with plentiful black hair. Often the Indian women are handsome.

The great bulk of the Mexican nation is formed of the

peon class, the agricultural and mining labourers, whose white cotton dress, scarlet *zarapes*, distinctive hats and sandalled feet, give a unique character to the country-side, They are an exceedingly hardy and generally docile race, capable, however, of showing extreme passion, which translates itself into bloodshed upon small provocation. They have, in the past history of the country, been looked upon as mere material for revolutionary arms, and in times of peace as tillers of the soil or workers in the mine for the enrichment of an employer class; and their nomenclature of "peon" indicates the semi-serfdom under which they dwell. They are in reality a race with many good qualities, and have undoubtedly an important future before them as soon as more equitable conditions of life may be brought about. The peons of Mexico number many millions of people, and formthe most numerous working-class body of a homogeneous nature in Latin America, and are, or ought to be, considered the most valuable of national assets. Wealth in Mexico ought to be "life" rather than cash, and no real progress will be attained until this truth be recognised. But the food and housing of this class are of the most primitive character. In the towns and upon the better class of the *haciendas* or estates, mud huts and houses, without any pretensions to comfort, form their dwellings, and among the very poor, wattle huts or "jacales" in great part. The family pot is often boiled on a fireplace of rude stones outside, and its contents are generally lacking in meat, which is scarce or too costly for them. The well-known "tortilla," or pancake of maize flour, ground by each housewife in a "metate" is the only form of bread within their reach. Beans and chillies are the alternative staple articles of diet, and upon these simple foods the peons labour in the fields or the mines from daylight to dark. The occasional bull-fight, or more or less drunken carouses, interposed with the numerous Church festivals, form their principal sources of diversion, for of literature, sport, or travel as enjoyed by the working classes of Europe the agricultural labourer and miner has none. The Mexican is often revengeful and blood-thirsty when aroused by the passions of jealousy in amatory

matters, and by drink, which are generally the cause of the constant brawls and cases of homicide among the peons. Homicide is very frequent, and in these characteristics they resemble the Chilean *roto* somewhat, or the *gaucho* of the South American pampas. Of a strong, crude, valuable human material the country is well supplied, in the lower element and working class.

That the Mexicans are a fighting race has been borne out by their revolutionary history. They combine two warlike elements—the fierce Aztecs whose sanguinary religion and priesthood animated them in early times, and the Spanish Conquistadores, between whom the country suffered a terrible baptism of blood. The warlike spirit which even the taming method of commerce, which is insistently knocking at the gates of Mexico, cannot banish, is reflected in their national anthem: "Mexicans! the voice of war; draw sword and grasp the bridle, and the very caves shall resound at the sonorous roar of your cannon!"—as one verse of the song may be freely translated. Whether they will ever develop into a manufacturing people is doubtful. As knowledge of their democratic rights advances they may be expected to demand these to the full, but as yet they are scarcely awakening to such, or to any organisation for the betterment of labour. Nevertheless, during recent years there were serious strikes in the cotton, woollen, and jute mills in the federal district, and in Orizaba, Atlixco, Puebla and elsewhere, and more than 30,000 men were idle as a result. Several thousand men made a demonstration in the capital: a procession carrying banners, with "Shorter Hours" and "Better Pay" inscribed thereon. In the outlying states, upon some of the ranches, the workers presented petitions to the governor of the states, asking for a scale of wages proportionate to their work, instead of the uniform wage of 37 cents per day, equal to about $9\frac{1}{4}$d., which is their customary pay. There was a further strike in the city of Mexico, concerning the reinstatement of a worker who had been dismissed; and, at the close of 1912, the employés on the Mexican railway, to the number of 7,000, went on strike, demanding an eight-

hour day, a pension system, and other improvements in their working life. Thus some progress in the knowledge of their rights is indicated; and men who can strike for their industrial betterment, just as they fought for national freedom, prove themselves neither apathetic nor degenerate.

The principal sources of amusement of the Mexican people are in bull-fights, theatres, horse-racing, lotteries, and other matters into which an acute or gambling element enters. Horse-racing has become a sport of the wealthy classes, as in South America, and the racecourse is thronged with well-dressed people in the seasons. But the sanguinary spectacle of the " corrida de toros " or bull-fight still remains the national sport, appealing strongly to the lower element, and, if in a somewhat diminishing degree, to the upper. These " funciones " are fully attended by frock-coated men and finely-dressed señoras and señoritas, who applaud each phase of the contest, regardless of its cruel character, and of the evil effect it has upon the morals of the peon class, who crowd thereto in their thousands. The full ceremony and show of the Spanish bull-fight is exhibited at these performances, which customarily take place on Sunday afternoon, after the solemn religious observances of the morning. The huge ampitheatre around the bull-ring is divided into the " Sol " and " Sombra " or sun and shade, the first containing the cheap seats for the lower class, the second the reserved seats for the elite. The gaudily-dressed " toreros " and " picadores "—some of the former mighty heroes, at least in the popular estimation—enter amid a roar of applause from the sea of spectators around the great circle of the arena; the first bull is admitted, charges, and is played and goaded to madness, and the unfortunate horses, at times gored and with their entrails protruding, give up their miserable lives to an accompaniment of popular frenzy or indifference, according to the character of the fight sustained by their riders. At times the wound in the horse's bowels is hastily sewed up, and with a picador on his back, armed with huge spurs, another tugging at his bridle and a further one behind him with a whip,

the poor beast, blindfolded and trembling, faces his destruction. As many as ten horses at times are gored or killed by a bull which is really " bravo." The " banderilleros "—the bearers of barbed, decorated darts—skillfully place these in the neck of the maddened bull, facing him calmly, which act draws, when successfully performed, roars of applause; and the " capeadores " make " pretty " play with their scarlet cloaks in feint and retreat. Not unfrequently these actors in the drama are injured or killed by the infuriated bull. Lastly is the " espada," the leader of all the band of fighters, having, perhaps, a reputation earned in Madrid itself: and to the sound of low and mournful music he approaches the now wearied but still vigilant and infuriated bull, and deals him the practised stroke which lets loose the animal's life-blood, and at the same time the tumultuous applause of the crowd.

The city of Mexico has certain attributes of situation and historical tradition which entitle it to rank foremost among the Latin American capitals. In point of population it comes next to Buenos Ayres. The city stands in one of the finest valleys in Latin America—the valley of Mexico, on the plateau of Anahuac, forming the southerly extremity of the great Mesa, or tableland of Mexico, whose high elevation above sea level has placed it in the cool or temperate lands, in a vigorous climatic environment. Exceptionally romantic lore and powerful historic tradition centre in Mexico, such as no other city in the New World possesses. It was the seat of the Aztec civilisation, and in its broad plaza stood the great teocalli, or sacrificial pyramid, the Mecca of early Mexico—Tenochtitlan, almost the unconquerable. After the Conquest the city of Mexico was the seat of the viceroys and the capital of " New Spain," as Cortes named the country, whose rule covered the whole of Mexico, part of Central America, and extended to what now are the American states of California, Texas, Arizona, and others. Under the transient rule of the emperor Iturbide the city of Mexico was the capital of the third largest empire in the world, being less in area only than the Russian and Chinese empires. Following upon Iturbide came Juarez,

the famous Indian lawyer-president, and Hidalgo and Morelos, the liberators, two of the most renowned figures in the history of the country. Lastly, the pathetic figure of Maximiliano of Austria arose, succeeded by the commanding personality of the dictator Diaz: who himself, entering at the bayonet's point, went out in a shower of bullets. The massacre of the Aztecs, the terrible struggles of Cortes and his band against the lake fortress, the fires of the Inquisition, the rule of the viceroys, beneficial and malevolent by turns, the long years of fratricidal struggle and *pronunciamientos* after independence—all these have left their mark or written their traditions upon the handsome and romantic city of the Mexican uplands, where the modern spirit struggles to overcome the mediæval.

The city of Mexico is, in general, of spacious and pleasing aspect. The great plaza or zocalo, the public square which forms its centre, and which is nearly 700 feet in length, is overlooked upon its principal side by the handsomest and most massive cathedral found in the whole community of Latin American states. The two great towers of this cathedral, rising to more than 200 feet, are conspicuous landmarks when beheld from the environs of the city, and the fine façades bear witness to the skill and care which its Spanish builders lavished upon this most representative example of ecclesiastical architecture in the New World. The building is more than 400 feet long, and nearly 200 feet wide, and the interior, in the general form of a Greek cross, contains two great naves and three aisles, with twenty-two side chapels and a resplendent altar with marble columns, a balustrade with sixty-two statues and giant candelabra of gold, silver, and copper alloy. Twenty Doric columns support the vaulted roof; rich carvings, gildings, and some rare paintings adorn the walls. The religious character of the city under the Spaniards was well exemplified in the cathedral, and in the sixty other massive churches throughout the city, as well as in the other religious edifices, originally more than 120 in number—including convents and monasteries, many of which were turned over to secular purposes at the time of the Reform.

THE CATHEDRAL OF MEXICO

The city is laid out with geometrical regularity, the streets oriented, many of them wide and handsome, others—and among them the principal business thoroughfare, that of Plateros—narrow. The Calle de Plateros or "Street of Silversmiths," however, is lined with shops whose display attests the luxurious taste and wealth of the upper Mexican element. On the east side of the plaza is the Palacio Nacional, containing the government offices, the senate chamber, archives, national museum, observatory, and other institutions, a building covering some ten acres of ground; and over its main portals hangs the "liberty bell" of Hidalgo, the Mexican hero who, a humble parish priest, first aroused with his famous "grito," or cry for civic and religious liberty, the national spirit of independence which culminated in the throwing-off of Spanish rule. This bell is rung, on each anniversary of that occasion, by the president of the republic, at midnight. The Palacio occupies the site of the great palace of Moctezuma, which was so large that the Spaniards of Cortes, who afterwards destroyed the building, complained that they lost their way in its rambling interior. In the museum, among many objects of the utmost interest—not only to archæologists, but to visitors and observers generally—is preserved the famous "Calendar stone" or "Sun stone" generally assigned to Toltec culture, and the "Sacrificial stone" which was found in the ruins of the great teocalli.* The National Library is a handsome building, containing upwards of a quarter of a million books; and was formerly the old St. Augustine church, assigned to its present use by Juarez in 1867. The Mineria, or mining and engineering school, is one of the primary institutions of the city, and the former palace of Iturbide is a fine specimen of colonial architecture, now occupied as the principal hotel. The new legislative palace, new post-office, new penitentiary, palace of justice, schools, and university are the outcome of modern times, handsome and costly structures of their kind; and the Jockey Club is a further representative institution, the rendezvous of fashion in Mexican society as concerns sport and club life.

* Described in a subsequent chapter.

The Monte de Piedad, or National Pawnshop, is perhaps a unique institution. It was endowed by the Conde de Regla in 1775, and its function is to grant loans to the people upon personal property, a system regarded as a boon by the poor, who are thus protected from the methods of the ordinary pawnbroker and treated with scrupulous fairness in their loan operations, whether of the humble or whether of the necessitous " rich " class. The operations of this nature, carried out by the national pawnshop reach at times the sum of £50,000 per month.

The old Spanish buildings in Mexico, both in the capital and in the large towns throughout the republic, were very solidly constructed of cut stone. The private residences of the upper class were defended by iron gates, massive doors, and grille-covered windows, giving that mediæval aspect to the streets which forms so notable a feature of Spanish American towns, and capable of withstanding assaults—such as, indeed, they were often called upon to sustain, and which service they may yet have to render in the evolution of Mexican civic life. They also have the customary flat roofs or *azoteas*, with parapets, and are built around open courts or *patios* in the Moorish style, forming pleasing and protected retreats for the occupants. In these old-style residences the living-rooms are on the upper floor, approached by a handsome staircase, often of marble, adorned with palms and flowers in tubs, the lower being occupied by shops, stores, and servants' quarters. There are numerous smaller plazas throughout the city, and a large alameda, or public garden, which is the centre of fashionable promenade, and of " church parade " on the Sabbath day. Both there and in the Zocalo, or main plaza, military bands play, but the plaza is a popular rendezvous rather than one for the fashionable, and crowds of peons and Indians and their women promenade unceasingly in the square, dressed in their picturesque costumes, vari-coloured, and typical, high-crowned Mexican hats, the national headgear ; smoking unending musk cigarettes, chatting and laughing, greeting their friends with doffed sombrero, eating native sweetmeats and drinking " pulque," the national drink, for

both of which refreshments there are numerous vendors; buying—those who can afford it—the cheap lottery tickets, the shrill cries of the sellers of which take the place of the strains of the band in the intervals—a happy, picturesque, malodorous crowd, in showy comparison with the "correct" European attire and deportment of the upper class. There is a great gulf between these people and their betters, strongly accentuated by the "philosophy of clothes" as represented by the *poncho* or "zarape" of the peon, and the coat of the Europeanised class; and the transitional stage across this social abyss is rarely bridged. The same picture is presented throughout the whole of the republic, from the federal capital to the capitals of the states, and to the most remote village.

From the city of Mexico a broad avenue or boulevard extends, the Paseo de la Reforma, running south-west for a distance of three miles to the castle of Chapultepec, a building historically famous, set upon a hill, and forming one of the residences of the president. This handsome drive, one of the most noteworthy in Latin America, is lined with modern dwellings of the rich, adorned throughout its length with statues and fountains, and shaded by eucalyptus-trees; and it is crowded on the Sabbath day with the handsome equipages of the rich. The statues include those of Columbus, Juarez, and one to Guauhtemoc, the last Aztec emperor, who suffered torture and death at the hands of the Spaniards. There is no statue, it is to be noted, to Cortes in Mexico, just as in Peru there is none to Pizarro, a fact which sufficiently interprets the underlying feeling towards the Conquistadores of Spain.

The older suburbs, or adjoining residential centres of the city of Mexico, such as Tacubaya, San Angel, Tlalpam, and others, are quaint and attractive retreats of the wealthy Mexicans, and many of the houses are veritable palaces, embowered in orange-groves, luxuriant gardens, and flowers, secluded from the common gaze, and more aristocratic in their environment perhaps than any other haunts of the rich in Latin America. Living and house rents in the city of Mexico are extremely high, as is the cost of imported

articles,due to heavy import tariffs,and the cost even of native produce tends to rise. The rents of flats, or " viviendas," as the upper and lower stories of the town houses are termed, in which a large part of the upper and middle class dwell, are exorbitant. Rents for such, or for ordinary dwellings, are more expensive than similar accommodation in British or European towns would demand. A movement has been made, however, of late, towards cheaper houses in the newer suburbs, which the extension of the tramways facilitates, but the phenomenon of high cost of living is almost as marked in the Mexican capital as in Buenos Ayres and other South American capitals. In their newer suburbs and in their new business structures the Mexicans have somewhat lost the art of quaint and attractive building which characterises the older work, and a cheap spirit of modernity or commercialism begins to prevail.

The main streets in the city are served by an efficient electric tramway system, embodying nearly 200 miles of line, which extends to the suburbs, and the streets are lighted by electric light. The systems are under the control of a British company, an enterprise of a prosperous character, which pays a good interest upon its considerable capital, due partly to the love of indulging in jaunts and travelling of the peon and Indian class, who crowd the third-class vehicles on the " dias de fiesta " or numerous holidays ; and it is their " centavos " which contribute largely towards the dividends reaped by the British shareholder.

The quaint streets and good residences of the upper class in the city of Mexico give place to extensive " slums," miserable abodes of adobe and mud, in unpaved, unsanitary streets, mean and malodorous, where the poor dwell, and in certain quarters forming the haunts of the outcasts and criminals of both sexes, where the traveller ventures at his peril, or accompanied by a " sereno " or gendarme, as the native policemen are termed. Very large areas of the city are covered by the dwellings of the poor, and improvement in this respect is greatly needed. The contrast of wealth and poverty in the Mexican city is extremely marked, with half-clad Indians and beggars in the streets mixing with the Europeanised classes.

The high cost of living in Mexico is not confined to the capital, nor to any particular class, but exists in other places, and among the poor. In Vera Cruz it has steadily advanced, and there seems no prospect that it will fall to its former level. As is always the case, wages and salaries have not kept pace with the increased cost of living, and as house rents have doubled and even trebled during the last twenty years, people in even moderate circumstances find living difficult. The ordinary labourer, although he lives principally on beans, rice, maize, cheap cuts of meat, when he can afford any, coffee, when able to buy such, tortillas, and chillies, is often obliged to stint himself and family severely. In the smaller towns, however, the cost of food is not generally high, although rents and imported articles are disproportionately expensive. One dish is the usual rule for each meal, which is generally finished up with a mess of beans. Bread is not very largely used, although becoming more common; but in general the poor people prefer the tortillas, made from maize flour. The cost of the articles most generally used by the lower middle classes, such as bacon, meat, and so forth, commodities which lie generally out of the power of the ordinary labourer to buy, have all risen greatly.

Beheld from the hills which form the rim of the valley of Mexico—in places clothed with health-giving pine-woods—the capital and its environment unfold pleasingly to the eye. The domes and towers of the many churches, Chapultepec and its hill of venerable cypresses, the cultivated fields and running streams, the embowered smaller towns and hamlets, such as San Angel, Tlalpam, Tacubaya, and others, the green alfalfa patches and maguey plantations, intersected by the white, dusty roads leading to the *haciendas* and away to the hills, all overlooked by the two snowy peaks of Ixtacihuatl and Popocatepetl, and backed by the blue upland sky, form a picture typically Mexican. A short distance from the capital lies Guadalupe, the Lourdes of Mexico, the famous shrine, built on the spot where to the poor Indian Juan there appeared—miracle or fable—the vision of the Virgin, and where, since that time,

miraculous or fabulous cures of the halt and the blind are effected.

There are, however, barren wastes within the valley, great lava-flows of an earlier age, and swamps and marshes on the shores of lake Texcoco. This great lake, some distance from whose shores the capital lies, is a somewhat dreary waste of brackish water which was formerly of much greater extent, and in times gone by frequently flooded the city and brought destruction to its inhabitants. The valley of Mexico is, or was until the drainage canal and tunnel conducting the overflow of the lake to the gulf watershed was constructed some fifteen years ago, a closed hydrographic basin, with no natural outlet for its waters. Hydraulic works for regulating the lake were begun by the Aztecs previous to the Conquest, and later an enormous cutting was begun, but never completed; and successive viceroys afterwards strove to accomplish the same enterprise. But it remained for modern science to carry the work out, with a firm of British contractors, and the drainage of the sewage-impregnate subsoil of the capital followed. The canal is thirty miles long, with a tunnel six miles long, and the work cost the government more than 16,000,000 silver dollars. The outflow actuates a hydro-electric power station. Forming part of the lake system of the valley are the beautiful lakes of Chalco and Xochimilco—the latter meaning "a field of flowers"—and connected therewith is the famous Aztec Viga canal, and the so-called "floating gardens," composed of patches of land built up in the swamps and bearing a profuse harvest of flowers and vegetables. It has recently been proposed to drain the great lake Texcoco, and its reclamation would yield, it is calculated, some 100,000 acres of fertile land, which would be divided into small farms and sold to the people. The examination made by the government engineers shews that the work of drainage would occupy twenty-five years, and would necessitate the lowering of the great drainage tunnel some thirty centimetres, as its present level is scarcely below the level of the lake bottom. It is calculated that two years would be required for the actual

emptying of the lake, which would be allowed to fill and empty alternately until the salt were eliminated. The rivers which flow into it, and which bring down a sediment every year, would fill in the bed with silt and clay, forming fertile lands, capable of yielding an increased food-supply for the city.

At the time when the Aztecs flourished, at the advent of Cortes, the lakes in the valley of Mexico were much more extensive, and the city was surrounded by water and almost impregnable; reached by stone causeways across the lake, which the Spaniards traversed at the invitation of Moctezuma; and upon which many of them perished in the terrible retreat of the "Noche Triste." On their retreat, broken and spiritless, they passed beneath the shadow of the great pyramid of the sun, of Teotihuacan, which even then rose from the desert ruined and desolate, its builders unknown even to the Aztecs themselves. For, even the Aztecs were at that time comparatively new-comers in the valley, and the pyramids were the work of a much earlier age, as described later.

Puebla is the second city of importance in the republic, and the capital of the state of the same name. It is situated on the banks of the Atoyac river, sixty miles south-east of the city of Mexico, and is a community of striking orderliness, and distinguished by its clean, handsome streets and fine buildings. The population is about 120,000, including a large percentage of Indians, and it is connected by two lines of railway with the city of Mexico, and with Vera Cruz, Pachuca, Oaxaca, and the terminal ports of the Tehuantepec railway—Coatzacoalcos and Salina Cruz. The city is built on a broad, healthy plain, about 7,200 feet above sea level, and is well provided with street railways, electric and gas illumination, and water and drainage systems. The great Doric cathedral, which was completed in 1649, is among the finest ecclesiastical structures in Latin America, and among other churches famous for their lavish decorations are those of San José, San Cristobal, Santa Catarina, and San Domingo. The principal theatre, built in 1790, is said to be the oldest existing theatre on the

continent, and there is an immense bull-ring. Among the principal public buildings are the Palace of Justice, the buildings of the State Legislature, a school of medicine, a library with over 100,000 volumes, an academy of fine arts, and the National College. At Fort Guadalupe, near the city, there are several hot sulphur springs, which are used for medicinal baths. Puebla is one of the busiest manufacturing cities in Mexico, and among its principal products are cotton and woollen textiles from the well-established mills, generally actuated by water power from the river: and there are also some large foundries. The manufacturing element, however, has not been permitted to spoil the general character of the city, which remains a source of pride to its inhabitants and of some admiration to the foreigner, who in general is unaware of the existence in southern Mexico of so advanced a centre of population. The history of Puebla is closely bound up with the political development of the republic, and its environs have been the scene of fierce revolutionary struggles.

The snowy peak of Popocatepetl, which overlooks the city of Mexico and is seen also from the city of Puebla, is one of the most interesting mountains of North America: a volcano, reaching an elevation of 17,800 feet above sea level. The crater has experienced no violent eruption since 1802, although sulphurous smoke is emitted at times—hence its name of "smoking mountain" in the Aztec tongue. Popocatepetl and its sister mountain Ixtacihuatl form the most prominent landmarks in Central Mexico, and were objects of veneration by the early Mexicans, the Aztecs, and others. Cortes and his Spaniards, on their passage upwards from the coast, at the time of the Conquest, first beheld the great city of Tenochtitlan, as the city of Mexico was termed by the Aztecs, from the high ridge between these two snowy mountains. Below them the Aztec capital lay, its walls gleaming on the margin of lake Texcoco. Some of the Spaniards reached the rim of the crater on that occasion, and afterwards obtained sulphur therefrom. Recently a project has been brought forward by a British syndicate to build a railway to the summit,

Popocatepetl, Mexico

to establish a sanatorium for tuberculosis thereon, and to exploit the crater as a sulphur mine. Over such a line in a ride of two hours from the city of Mexico the passenger would experience a very marked change in temperature: from temperate conditions to that considerably below freezing-point. The mountain of Popocatepetl is private property, not a state possession, and its original owner obtained large quantities of sulphur from the crater by laborious methods. In a report made by engineers of the government it was calculated that 150,000,000 tons of sulphur existed in the crater, the main deposit being about 500 feet below the rim; and that as the sulphur was constantly being re-deposited from the sulphurous smoke, the mountains formed a species of natural sulphur manufacturing plant on a vast scale. Motive power for such an undertaking, it is affirmed, could be obtained by means of a hydro-electric installation actuated by the cataracts which descend the slope of the mountain, from the thawing of the snows.

The name of the other snowy mountain, Ixtacihuatl, means, in the native tongue, the "Sleeping Woman," so called from the fanciful resemblance of its serrated outline to the form of a recumbent woman. The highest summit is 16,960 feet above sea level, and the appearance of the mountain is singularly beautiful. The two mountains, Popocatepetl and its companion, form part of the Cordillera de Anahuac, in company with Malinche, another peak, of 14,630 feet elevation; a cross ridge of volcanic formation, and of more recent origin than the Sierra Madres, which it unites. A further Mexican peak, at times snow-covered, is the Nevado de Toluca, 14,950 feet high, and on the west coast is the principal or only active volcano in Mexico, that of Colima, whose crater is 13,000 feet above the level of the Pacific ocean.

The mountains of Mexico do not nearly approach the elevation of the Andes, and only three peaks throughout the country—two of which have been described—rise above the perpetual snow-line. The third and highest is Orizaba, a symmetrical cone which rises from the eastern Sierra Madre

to an elevation of 18,250 feet above sea level, and is visible from far out in the gulf of Mexico, on approaching the shores of Vera Cruz. The native Indian name of the peak was Citlalteptl, or the "mountain of the star," and the snowy peak, its base often surrounded by clouds, appears at times as if hanging in the blue firmament.

Vera Cruz, the historic seaport of the gulf of Mexico, is the most important gateway of the country by sea. Upon the flat, sandy shore Cortes and his Spaniards first landed on Easter day in 1520, and having burnt his caravels to avoid mutiny the Conquistador established a colony and set forth for the Aztec capital, which lay behind the great mountains looming upwards to the west. The ascent of Cortes and his band to the valley of Anahuac is one of the epics of history. To-day two lines of railway connect Vera Cruz with the city of Mexico, and of recent years the port, formerly a plague-spot of yellow fever, with its shipping subject to the devastating gales, or "nortes," from the gulf, has been greatly improved by new breakwaters and port works, and by sanitary methods. On a reef stretching out into the bay is the old fort of San Juan de Ulloa, which was built to protect the town, long pillaged by privateers. Vera Cruz has been captured both by the French and by the Americans, and has an interesting history. The climate is hot and humid, and the foreigner generally loses little time in taking the train for Mexico, 263 miles distant. The Mexican Vera Cruz railway is one of the most famous scenic lines in the world. It was begun under the rule of the emperor Maximilian, and completed in 1873 by a British company; and the great engineering difficulties overcome entitle the line to a foremost rank in railway-building enterprises. Crossing the coastal plains the track winds among the profound "barrancas" or ravines of the Sierra Madre, passing from the tropics through a rich, tangled forest belt, over roaring torrents by high steel viaducts to the temperate zones; and thence over the mountain fastnesses, to gain the elevation of the valley of Mexico. The view from the Maltrata summit which is reached on the route is one of the most remarkable that the traveller can encounter: the town and country lying spread out far below.

One of the principal and most attractive cities in Mexico is Guadalajara, the capital of the state of Jalisco and the second or third in the republic in point of size. It stands upon the western side of the plateau, surrounded by great plains of wheat-growing capacity, at an elevation of slightly over 5,000 feet above sea level, and enjoying an exceptionally favourable climate. Guadalajara is a city of some note as regards its public buildings and institutions, religious and secular, with a handsome cathedral, and a population of more than 150,000 inhabitants. To the south-east, near at hand, lies the fine lake of Chapala, eighty miles long, and of much scenic beauty, forming the source of the Santiago river, which flows for 200 miles to the Pacific coast. Upon the upper course of this river are the great falls of Juanacatlan, worthily called the Niagara of Mexico.

The great mining towns of Mexico are full of interest and romance, and are still centres of considerable mineral production, as elsewhere described. The principal seaports on the Pacific coast are Mazatlan, San Blas, Guaymas, Salina Cruz, and Acapulco, and some of them have been improved by new harbour works of recent years. The harbour of Acapulco possesses an anchorage which has been favourably compared with that of Rio de Janiero and Sydney, as one of the finest in the world: and when the projected harbour works are completed it will be one of the best havens on the Pacific coast of the Americas. Acapulco has an interesting history, dating from the time of Cortes and the Spanish galleons.

The most progressive city in the north of Mexico is Monterey, formerly connected with the capital, 606 miles distant, by a waggon road, and now the centre of a railway system. The population numbers more than 80,000, and there are important industries of woollen mills, smelting works, brass and iron foundries, a steel-producing plant, flour-mills and breweries, and others, generally controlled by foreign capital, and actuated by water power. The surrounding district is fertile, with a rainfall of about twenty-two inches; the climate is dry and mild, and the city

furnishes a health resort for people from the United States. Monterey was founded in 1560, and is laid out with broad streets, and covers a considerable area, with a cathedral and bishop's palace. The city suffered severely from a flood in 1909, due to the overflow of the Catarma river, on whose banks it is situated. Historically it retains many memories of the American war in 1849, when it was the scene of a severe struggle between the Mexicans and the Americans.

Conditions of life and travel, away from the railways in the more remote parts of Mexico, have altered but little in the past years. The roads are dusty or rocky mule-trails, with a few highways in the plateau region over which an occasional " diligencia " runs, drawn by mules driven four-in-hand. In many of the smaller towns there are small primitive *fondas* or hotels, but in remote hamlets private hospitality must be sought, and this is often forthcoming, for, by nature, the Mexicans are a hospitable people—a primitive virtue born both of character and the semi-mediæval conditions under which they dwell. There is the same desire among the " gente racional," or progressive-minded mestizo element, to appear abreast of the times, as is encountered in South America : a useful pretension, indicative of the spirit of progress which awaits the looked-for regeneration and development of their backward regions. Among the peons, the faithfulness and assiduity to serve which they display, and their care in details, is in contrast with their habits of makeshift and procrastination. With both classes, to-morrow will serve equally as well as to-day, and " mañana " is a peaceful and convenient refuge. The Mexicans, like all their Latin American kindred, are not a road-building people. The mule-trail suffices them. The *caballero* goes mounted, the horse is an adjunct of his gentility, and he would not walk, unless upon a city pavement, and the peon and his woman tramp in the dust which has served their forefathers and will serve them. Nor are Mexicans by nature careful of sanitary conditions ; and the traveller's sense of smell quickly warns him when a hamlet is near. The small patches of maize, and the groves of

prickly pear, contending with the aridity of the desert, shew how a primitive people can wrest a living from rocks and thorns ; and some diminutive irrigation channel, scooped around the base of the hill from a trickle in a neighbouring rocky gulch, indicates that art has been added to ungrateful nature. Perchance some native maiden, standing poised by a spring—which seems as if it issued from some rock—with a great " olla " upon her head or shoulder, indicates where lies the water supply of the community. The crosses which from time to time the horseman passes, planted by the wayside or on the summit of some rocky knoll, are in memory of wayside tragedies, or are silent exhortations regarding things eternal, for the Indian character is devout.

The strong contrasts of social life in Mexico have their counterpart in the physical realm, and no country offers greater comparisons between the arid and the fruitful in nature. The scorching or dusty wildernesses of the great plateau are subject at night to the bitter cold of the rarefied atmosphere, induced by the great diurnal change of temperature. The bare, rocky mountain ranges which traverse or bound the plateau are rich in minerals, but, except in certain regions, are sterile and unclothed by timber. Apart from this natural bareness the face of the country in the path of the locomotive has been much denuded of timber in certain districts, as well as by wasteful clearings : a condition which may react unfavourably upon the landscape and rainfall in the future. There are, however, in other districts, forests of common oak, spruce, fir, and pine, and among the most striking features of the uplands, from 9,000 to 15,000 feet elevation, are the great coniferous forests. On the other hand, the valleys of the lowlands run riot in tropical growth. They are often of the most picturesque and alluring aspect imaginable, and trees, flowers, insects, birds and reptiles vie with each other in prolific life and colour. Profound canyons, threaded by limpid streams, in the midst of the deepest solitude, display a wealth of form and colour in arboreal and floral vegetation such as is scarcely encountered elsewhere except on the Amazon. In the neighbourhood of the towns and *haciendas* the

clearings exhibit luxuriant coffee and banana plantations, and the half-wild gardens and the *arroyos* or ravines are overhung with the most luscious and succulent fruits that can be conceived. Hanging from the feathery palm-trees are clusters of cocoanuts, rising above the orange and lemon groves ; and among the rocks, or upon the old stone walls of the enclosures, the iguana, a great tropical lizard, disports itself, and tropic butterflies of great size and gorgeous colour flutter among the flowers. Great areas of succulent sugar-cane, tilled by white-clad peons, irrigated from canals conducted from sparkling torrents, cover the more fertile slopes and valleys ; and, as far as nature is concerned, peace and plenty might seems to reign paramount.

Mexico is not a land for the sportsman, as there is little beyond a few deer or peccaries or coyotes upon the uplands, and no great fauna in the tropic lowlands, such as in Africa attracts the big game-hunter. But the types of both animal and vegetable life belong to those of the northern temperate region and to those of the southern tropical region, Mexico forming a transition ground between the two. The jaguar and the puma are scarce, and the buffalo has practically gone. The monkey, alligator, and crocodile abound, the one in the tangled woods and the other in the rivers and lagoons of the tropic lowlands ; and the rattlesnake and the boa-constrictor, the turtle and the vampire, are other occupants of that zone. The wild turkey was the progenitor of the domestic bird which Mexico gave to Europe ; the "zen-zontl," or mocking-bird, the humming-bird, the zopilote or buzzard, known as the scavenger of the plains and the cities, is preserved by law in Vera Cruz : and the mournful "tecolote" or night-owl and the "quetzal," whose wonderful plumage was reserved by the Aztec rulers for themselves, are among the best-known birds of Mexico. Among the insects are the destructive termites, or white ants ; and the venomous tarantula and the scorpion, or "alacran," are found in proximity to the dwellings of man.

Due to its geographical position and the varied vertical climatic zones, with an extensive barren tableland between two tropic and forestal coastal regions, Mexico presents

UNITED STATES
GULF OF MEXICO
PACIFIC OCEAN
MEXICO
CENTRAL AMERICA
NEW ORLEANS
Ciudad Juarez
Chihuahua
Matamoros
Monterey
Saltillo
Durango
Mazatlan
Zacatecas
S Luis Potosi
Tampico
Guadalajara
Queretaro
MEXICO
La Puebla
VERA CRUZ
Colima
Acapulco
Oaxaca
Tehuantepec
Salina Cruz
Gulf of Campeachy
Yucatan
Peninsula
Merida
Campeachy
Sisal
Progreso
Belize
BRIT. HONDURAS
Gulf of Honduras
Isthmus of
Guatemala
Tuxpan
Tampico
Monclova
Torreon
Chihuahua
Guaymas
Hermosillo
Culiacan
Tepic
Manzanillo
Acapulco
Tehuantepec
Tonala
Huisala
Tilapa
Moldonado
Tres Marias Is
Revilla Gigedo Is
C Corrientes
C Lucas
C Palmo
C Engano
C Catoche
Cozumel I.
Espiritu Santo B
Sabancuy
S Jose
Carmen
Coatzacoalco
Tumbala
Chiapa
Orizaba
Pico de Orizaba
Mexico
English Miles
0 50 100 200 300
Railways
"GEOGRAPHIA" LTD 33 STRAND, LONDON, WC
Long. West of 100 Greenwich
110
100
90
30
20

a diversity of plant life so great as is scarcely encountered in any other country; including species from the tropical to the temperate. Rare cabinet and dye woods, palms and lianas, mangroves and orchids are, on the one hand, the result of these conditions, and fine forests and pasture-lands on the other. The most characteristic plant in Mexico is the cactus, of which there are about 1,000 species. Among these the enormous "organo" arrests the view, with its astonishing formation and appearance; and the nopal and the various kinds of maguey furnish invaluable sources of food and industry to the human inhabitants. Mexico is a paradise for the botanist at least, and very large regions remain to be examined. No idea could be given in a brief description of the marvellous variety and splendour of the flora of the Tierra Caliente. The forests of the hot lands, like those of the Amazon, are not composed of a few dominating species, as in the colder countries, but of countless kinds, woven together, struggling upwards from the mass out of the gloom they themselves have cast, to reach the sunlight. Of the delicious fruits of Mexico the many varieties are a revelation to the traveller, in the powers of nature in new form and flavour.

The river systems of Mexico are those of the east and west, slopes of the great plateau, and the few streams which lose themselves in the inland basins, such as the Nazas, and those of the Bolson of Mapimi. The Santiago, flowing into the Pacific, is the largest, 540 miles long, noted for its deep canyons and cascades; and the Yaqui, 390 miles long, the Balsas, 426 miles long, are other rivers of the Pacific watershed, but none is navigable for any practical purposes. On the Gulf coast, however, there are several navigable rivers, notably the Grijalva and the Usumacinta, navigable respectively for 93 and 270 miles, and there are various other fluvial ways along the east coast, of service for small craft. The regions of Tabasco and Chiapas, served by the above-mentioned rivers, are of great value as centres of tropical production. The great Colorado river, falling into the head of the gulf of California, the "Euphrates" of America, runs but a short distance through Mexican territory,

and the Rio Grande del Norte, the Conchos, and others, are valuable chiefly as sources of irrigation.

Agriculture is the principal source of Mexican industry and prosperity, notwithstanding the importance of mining and the almost fabulous wealth of gold and silver produced in the past. The wide range and great variety of the agricultural products of the country are due to the topography and latitude, and comprise cereals and other food products of the temperate zone, as well as nearly all those due to tropical regions. The principal agricultural products are determined by the matter of rainfall. Upon the plateau, portions of which form the most populated regions of the country, artificial irrigation is necessary for all crops, whether of cotton, maize, or other. The rivers and streams which traverse the region are torrential and intermittent in character, and only suffice to irrigate certain belts of territory, which represent only a small part of the available area. The irrigated districts are of great value, due to the fertility of the soil under the action of water; and the regimen of the rivers and appropriation of water for the canal systems have in some instances been made the subject of scientific study and careful legislation, although much more remains to be done in this field. Upon the plateau region, and the higher slopes of the littoral on both sides of the country, water is of the utmost value, and the future of Mexican agriculture will depend largely upon the methods taken to conserve the water-supply and to store it in reservoirs against the dry seasons, when many of the rivers become absolutely dry and parched. Important irrigation works have been carried out in various parts of the republic, including the international works upon the Rio Grande, forming the boundary with the United States. Large masonry dams and intakes have been constructed, and a canal system covering the zones of territory available for the use of the water supply. Works of this character have been made on other important streams. In the moister regions of the coasts the rainfall is much heavier, and especially south of Tehuantepec is excessive and tropical in character, and the slopes of the plateau are covered with dense vegetation.

The most valuable lands in Mexico, and the agricultural industries which flourish thereon, are in the hands of a comparatively few holders, the rich "hacendados," or estate owners, many of whom are millionaires. The wealth of this class contrasts strongly with the poverty of the people who produce it—the cotton-clad and sandalled peons, whose conditions of life are often a reproach to the Mexican social system. The timber-bearing regions are to a large extent in the hands of foreign syndicates.

Among the principal products of the country is cotton. The cotton lands lie mainly in north Central Mexico, and a typical district is that of the Laguna, in the states of Coahuila and Durango, upon the Nazas river, whose waters irrigate the plantations from a system of canals in the rainy season, after the manner of the lands of the Nile. A large number of cotton-growing *haciendas* or estates exists in this important region, where the deep alluvial soil is extremely fertile under the action of water. The plantations of the Nazas have created considerable wealth for their owners, and have produced as much as 145,000 tons of cotton in a year. The region forms part of the Bolson of Mapimi, a great area of land which in earlier geologic times formed a vast lake, and which has no hydrographic outlet, after the manner of other Mexican lake districts. The Nazas river terminates in a lagoon, whose only source of exhaustion is by evaporation and seepage. The drying-up process going on in Western America is further exemplified here, as in Peru and Chile, districts somewhat similar to the Nazas. British capital is represented in the cotton-growing industry of the Nazas; in the large estates of Tlahualilo. The centre of the region socially, is the pretty town of Lerdo. Somewhat similar districts exist in the vicinity of the other rivers of the plateau, whose entire flow of water at times is utilised in the canal systems. Fifteen others of the Mexican states of the republic produce cotton, but in much smaller amounts.

Following on the production of raw cotton an important textile industry has been established, with upwards of 150 factories distributed over a large part of the country,

forming the most successful and remunerative feature of Mexican industrial life. The factories are in most cases large, well-built establishments, with the machinery often actuated hydro-electrically, and employ more than 30,000 operatives in the aggregate. The production of raw cotton does not cope with the home demands, and large quantities are imported from Texas.

Sugar cultivation and manufacture is another important industry; confined to the regions of the Tierra caliente, or tropical lands, and part of the Tierra templada, or more temperate zone. Parts of the states of Morelos, Vera Cruz, Puebla, Oaxaca, and Sinaloa are entirely covered by sugar-cane plantations; and the whole of the domestic consumption, which is very considerable, is supplied by their produce, and at some periods a considerable export is made. Sugar production has been one of the most prosperous of Mexican industries, and the large estate owners have acquired considerable wealth therefrom. In the best districts the cane is grown under irrigation, and the soil is extremely fertile. More than 2,000 sugar mills exist, and of these 300 or more are equipped with modern machinery, the remainder being of primitive appliances and methods. The output for sugar production has reached a total of more than 250,000 tons of sugar and molasses, the greater part of the sugar being the brown cakes which are consumed locally by the poorer population, among whom it forms an important article of food.

The well-known maguey, the Agave Americana, known in Britain as the Century Plant, furnishes material for one of the most important agricultural industries of Mexico. From the fermented juice of this plant the national drink of pulque is produced, a beverage which has never been supplanted since the time of the Aztecs, notwithstanding that sugar-cane rum has a considerable consumption. The maguey is cultivated in large plantations, principally in the southern states of the plateau; the plains of Apam in Hidalgo yielding the choicest product. The value of the total production of pulque has reached as much as £1,000,000 sterling in a year, and trainloads of wine-skins,

in which the liquid is carried, are dispatched daily from the estates to the city of Mexico and other points, where the consumption of the drink is very great. Pulque is not an ardent form of alcohol, but it is an intoxicant, and its abuse is responsible for much of the criminality of the lower classes. Its production is in the hands of a powerful class of land-holders and legislators, who reap fortunes therefrom, as in the case of the rum production in the republics of South America ; and under present conditions legislation unfavourable to the distribution and consumption of the drink is not likely to be inaugurated. The ixtle fibre produced from the maguey is a valuable article of export.

The cultivation of maize has, in some years, reached the greatest importance among Mexican products. It is the staple food of the bulk of the people, and the soil and climate are favourable to its production, except that irrigation is necessary. Long droughts reduce the yield at times heavily, and importation becomes necessary. Better conditions of agriculture and scientific water-storage for irrigation would tend to make the country self-supporting in the growing of this cereal, but whilst more rapid profits from other products are obtainable by the large landowners, it is not to be expected that maize will be produced in such quantities as to render the country independent from the necessities of import, or immune from the dangers of famine. The grain is cultivated in all the states of the republic, both on the plateau and the coast lowlands. For some years the value of the maize produced in Mexico has reached the equivalent of more than £9,000,000 sterling.

Wheat grows less favourably than maize, but it is nevertheless a staple crop, grown in nearly all the states. On the plateau cultivation often suffers severely from the uncertainty of the rainfall and lack of irrigation. The value of wheat production has reached as much as £2,250,000 per annum.

The henequen, or sisal hemp, is cultivated almost exclusively in Yucatan, and is one of the prominent sources of agricultural wealth of the republic, its value in a year having reached more than £3,000,000. The fibre is exported

Photo *Underwood & Underwood*

MEXICO: TAPPING THE MAGUEY FOR PULQUE

to the United States, where it is principally used in the manufacture of binding twine for harvesting machines. The light, shallow soils overlying the calcareous rock formation of the peninsular of Yucatan are singularly favourable to the growth of this plant, and although attempts have been made to cultivate it elsewhere, such marked success has not been attained. The henequen plantations yield great wealth to their owners, who are regarded as the richest class in the republic. The contrast between this wealth, concentrated in a few hands, wrung from the soil by the labour of the peons, and the poverty of these, is one of the most striking examples of agricultural oppression in the world. In some cases the conditions of life of the labouring class and the Indians in that part of Mexico are little short of slavery, and are at times accompanied by gross abuses and cruelties of a most serious character, which, to the credit of the republic, should be remedied. The Valle Nacional and the Yaqui Indians also embody a history of a cruel and ruthless nature : a serious instance of the abuse of the native.

Another important product of Mexican soil is coffee, which has become an article of export. This is grown only in the lower lands of the tropical belt, and would not flourish on the plateau. The quality produced in certain districts, both upon the Atlantic and Pacific slopes, has acquired some reputation for excellence. The bean crop is an important one ; beans form one of the principal articles of diet of the labouring classes, and even appear on the tables of the upper classes. They are best known as *frijoles ;* and that a hard-working population can carry on its labours with a vegetarian diet of beans, maize, and aji, or chillies, is one of the remarkable features of Latin American life. The aji is the red pepper-pod or capsicum, and is largely cultivated for food, as in Peru and elsewhere.

A further profitable industry, maintaining more than 500 tobacco factories, is that of tobacco growing and the manufacture of cigarettes and cigars. Among the Mexican establishments is one of the largest cigarette factories in the world, established in the capital.

Potatoes, cacao, chewing-gum, peanuts, rubber are all important products of Mexico, and serve to shew the wide variety of plant life in the country. Rubber is produced in plantations to some extent, but the " guayle " is a prolific source of supply. The guayule is a low shrub which grows profusely on the northern plains, extending into Texas, and is of much interest as being the only non-tropical rubber-producing plant. The assortment of strange and delicious fruits produced in the tropical and sub-tropical regions indicates the power of food-production of the republic: almost every kind of fruit known to horticulture is found cultivated or wild within the country, from oranges and apples to cocoanuts, bananas, figs, and pine-apples. The succulent fruit of the nopal, or prickly pear, known as the *tuna*, grows wild, or with a minimum of attention, and is an acceptable and useful fruit for the poorer classes. The characteristic foliage of the prickly pear is encountered everywhere, the plant sending forth its sappy, thorny leaves even in the most sterile spots, wherever a little underground moisture may be found; and this cactus-fig is a marked feature of the arid lands of Mexico, as of many other lands. The production of cocoanuts might become a far more profitable and extended industry in Mexico, in view of the growing use of the nut as a food product, in the making of fats and oils abroad. The humid lands of the littoral are the home of the cocoa-palm, as are the slopes of the plateau and the southern part of Mexico, approaching Central America. Especially is this the case on the coast of Tabasco and Campeche, and on some of the islands, and small plantations have long existed in those districts, the soil being peculiarly favourable to the tree.

The value of Mexican agriculture has reached at times the equivalent of £30,000,000 sterling per annum.

Stock-raising in Mexico has become an industry of considerable importance, both as regards home demand and for export. The great cattle ranches are in the hands of wealthy owners, and are situated principally in the northern states, upon the plateau, and on the higher lands of the Atlantic and Pacific slopes. The main drawback to the

industry is the serious droughts which occur from time to time, when the great semi-arid prairies become strewn with dead and dying cattle. The absence of rivers and streams in these regions forces reliance almost entirely upon underground supplies ; and " norias " or wells, actuated by horse-whims or hand-power, are numerous. In times of the most severe and prolonged drought almost total losses of the herds are experienced, the animals dying from thirst and lack of fodder. In these districts considerable capital is necessary for success, but profits have generally been so large that losses have been regarded by the stock-owners with equanimity. The spectacle of dead and dying cattle left to rot or mummify in the sun and wind in these semi-deserts, because the soil cannot support them in life, and because negligent pastoralists will not even trouble to bury them, is a reproduction on a lesser scale of what is observed in Argentina. The solution in both countries will lie in a more diffuse ownership of the soil and more intensive agriculture, under the stimulus of science and civilisation, and possibly in the growth of co-operative measures. In the foothills of the coast region stock-breeding is possible with less capital and at less risk, the rainfall and pasturage being more plentiful.

Since their first introduction from Spain, both the equine and the bovine races have suffered severely at the hand of man in Mexico, as in Latin America generally, for in addition to the hardships inflicted by nature, in scanty fodder and drought on the uplands, the Latin American cattle-man is not a merciful man to his beasts. The vaquero of Mexico is among the most callous of a generally heartless calling, and understands little of that humanity to animals which characterises the higher civilisation of Europe. On the other hand, the Mexicans have earned a reputation for being, in their own peculiar field, the most expert horsemen in the world ; and in all that pertains to the profession of the vaquero and his marvellous management of the " reata " or lasso, and to the lore of cattle management, the Mexican has no superior in Latin America, not excepting the *gaucho* of Argentina and southern Brazil. The Mexicans train

their horses' mouths to a sensitiveness unknown to European or American horsemanship. They ride with a single rein and the heavy Mexican bit, which gives full control over the horse. This bit is not necessarily cruel, as has popularly been supposed, nor are the enormous spurs worn by the Mexican horseman as painful to the animal in their use as the small, sharp English spur. The heavy Mexican saddle, cumbersome in appearance and often profusely ornamented with filigree silver work and chiselled leather trappings, is extremely comfortable for the horseman, and, if heavier, is less irksome to the horse in the day's work than the small English saddle. The horse in Mexico is trained to a swift *paso*, or pacing march, from which he breaks into an easy lope and thence into a gallop. The trot is never used : it is the most uncomfortable mode of advance known. Nothing can exceed the ease and comfort for the horseman of the combination of governance, seat, and pace of the Mexican horse ; and horsemanship is one of the native arts.

The Mexican horses are small but wiry and active. Excellent mules are bred for the carrying trade. Both horses and cattle are of a somewhat degenerate type, having received little improvement since colonial times. The long distances the cattle are obliged to roam on the uplands for their pastures and water, have tended to produce a small, hardy, bony, large-headed bovine, which has departed greatly from the type of its ancestor introduced by the Spaniards. In the south and in the more fertile regions of the lowlands the cattle are, however, of a superior type. The number of cattle in the republic has been estimated at about 5,000,000 and the capital invested in stock-raising at the equivalent of £70,000,000 sterling.

In the state of Chihuahua, which is one of the principal cattle-regions, is the enormous property known as the Terrazas Hacienda, which has been described as the largest single estate in the world. It contains 8,000,000 acres of land, in mountain, plain, and valley, being 200 miles long and 150 miles wide ; and maintains 1,000,000 head of cattle, nearly 750,000 sheep, and 100,000 horses, requiring the services of 2,000 horsemen, vaqueros, and other

employés. This great ranch is provided with a slaughtering and meat-packing plant, to supply which 250,000 head of cattle and sheep are slaughtered annually. The water-supply is provided by 300 wells and five large storage reservoirs, which were made at a cost of 1,000,000 dollars, and the dwelling-house, it is stated, was constructed at a cost of 2,000,000 dollars and has accommodation for 500 guests, with 100 servants, and with extensive stables and gardens.

The mineral resources of Mexico have always been famous. The history of mining has been marked by various periods of activity. Before the Spanish advent, gold, tin, and copper were worked by the Aztecs, but the period of greatest production was that of the viceroys, when, under the system of forced labour, similar to that which obtained in the viceroyalty of Peru, silver was extracted in great quantities from the mines, and shipped to fill the needy coffers of the kings of Spain. The natives were often treated with great brutality; the poor serfs were driven into the mines by armed guards, forced to work under the lash, and even branded on the face, as observed elsewhere. There barbarities were the work of greedy colonists, and were not the result of monarchical rule necessarily, for the Spanish monarch constantly legislated for the protection of the Indian. In the middle of the nineteenth centurya great deal of British capital was invested in the Mexican mines, and much of it lost or wasted, but this was followed by a more successful American financial and engineering invasion of the mines. Of late years British capital has sustained various important dividend-earning enterprises, and a steady stream of gold flows from Mexican mines to London at the present time.

The ore-bearing zone of Mexico is more than 1,200 miles long, traversing the country upon the Sierra Madres from Sonora to Chiapas, the northernmost and southernmost states; and within this the rich mining districts are situated. The places most famous historically include that of Guanajuato, where the cruelties connected with forced labour under the viceroys reached their culminating point. One of the great mines here was the Valenciana, first worked in 1760, producing in fifty years more than 300,000,000 dollars

in silver, until the serfs rose in rebellion and massacred their masters. The town was granted a royal charter at the beginning of the seventeenth century ; and at the present time contains a population of more than 50,000 inhabitants. The Valenciana mine was afterwards successfully worked by an English company, and later by Americans. Zacatecas, equally famous, disclosed its mineral wealth in 1546, was given a royal charter later, and produced between 1548 and 1867 silver to the value of 800,000,000 dollars. At the present time it is a handsome and thriving city. Pachuca, a similar mining centre, was renowned both for its enormous output of silver and for the evolution of the "patio" process, for the recovery of silver from its ores by amalgamation with quicksilver. British enterprise was also displayed at Pachuca ; and in the cemetery of the town lie the graves of many Cornish miners who were imported for the more scientific working of the mines in 1824. These hardy, clever sons of Britain played their useful part in a strange land, and now rest there. The operations of the British adventurers at the great mines of Real del Monte were made the subject of foolish speculation and lavish expenditure. The sum of 20,000,000 dollars was spent in work upon these mines, but only 16,000,000 dollars' worth of silver was obtained. In Chihuahua, Durango, and Guerrero, the northern, central and southern states of Mexico, many millions of dollars in silver were extracted from famous mines in the eighteenth century, and massive churches were built with part of the proceeds. Thus, the history of mining has not been entirely barbarous or sordid in Mexico, the devout character of the Spaniards having assigned some share of the mineral treasure to religious purposes, in elaborate, holy monuments which have remained for following generations. A certain tax was regularly set aside at that period from mining operations to build churches, and the story of these ancient places and doings is one of the most romantic in the history of mining throughout the world.*

During the rule of Diaz, Mexican mining progressed greatly. In 1903 gold to the value of £11,500,000 sterling

* See the Author's "Mexico."

was exported, and in 1907 the republic stood second only to the United States in the production of copper, which amounted to 56,600 tons. Towards the close of the presidency of Diaz, laws were foreshadowed with the purpose of securing the possession of the mines to the nation, and of prohibiting their ownership by foreigners. It cannot be altogether denied that there is some justifiable ground for some such procedure. For the wealth of the soil to be worked for the enriching of foreign shareholders, with a relatively small proportion of benefit accruing to the native workers and the land generally therefrom, is an unnatural condition, which growing social conditions are likely to modify. The very considerable wealth produced by mining operations, it might have been supposed, would have served to benefit and upraise the labour which produces it. But this is not generally the case in any part of the world. The native Mexican miner is a hard-working and expert operative, as far as his own particular methods go, but his labour receives a very low wage, as does that of his fellows in Peru and other Latin American lands where minerals are largely produced. Mining settlements and camps consist in groups of miserable abodes of mud or wattle, clustered on barren hillsides, without pretension to beauty, sanitation, or comfort. There are no laws restricting hours of labour or rates of pay, or requiring safety appliances or hygienic methods in the mining districts of Mexico.

A large number of mines of gold and copper and of other metals and minerals are successfully exploited in Mexico at the present time, mainly by foreign companies, and are well known to the stock markets in London, New York, and Paris. Among the gold mines may be cited the enterprise known as the Mexican mines of El Oro, a British concern, whose product for the year 1912 was 142,844 tons of ore, from which gold and silver to the value of 1,555,000 dollars was extracted, equal to an average value of 10.89 dollars per ton, with costs of 4.37 dollars per ton, including development and taxes. The realised profit was £182,000, and dividends amounting to 16s. per share were paid. Another British

enterprise known as El Oro Mining and Railway produced 302,750 tons of ore, of an average value of about 7.46 dollars per ton, and highest value 18.27 dollars, with a small amount of silver. For the railway and timber department of this enterprise the net profit was given as 120,200 dollars. The export duty on Mexican gold has been raised to 10 per cent. recently.

The total value of the gold output from Mexican mines in 1911 was estimated at £5,000,000 sterling, and for 1912 £4,500,000; and of silver in 1911 £8,250,000, and in 1912 nearly £9,000,000. Of the silver £3,500,000 was in bar, the remainder in lead ore and in copper. The value of the gold and silver export in 1911 was equal to nearly half the total exports from Mexico. It is a noteworthy condition that, notwithstanding the disturbed political condition of the country and the constant fighting in certain districts, the gold output for 1911-12 was more than 7 per cent. and the silver more than 12 per cent. greater than the average of the four preceding years. So long as the equipment and personnel of the mines were not commandeered, and railways were kept open, guerilla warfare did not greatly injure the mining industry, but later the conditions were disastrous.

The enormous silver-lead mine and smelting works of Mapimi are in the hands of German capitalists; at Boleo in Lower California a French company works an important group of copper mines and smelting works; at Mazapil is the British Mazapil Copper Company, with large mines and furnaces; and at Canannea an American company controls and works extensive copper and silver mines. The deposits both of coal and iron in Mexico are of importance, and both have been subject to some commercial exploitation. They are not, however, among the most plentiful resources of the country, as far as present knowledge can indicate, but may develop in the future. In the state of Coahuila at Salinas, the coal deposits opened were estimated, in 1908, to contain visible supplies amounting to 300,000,000 tons, and although of a low grade are valuable sources of fuel. The great Cerro de Mercado,

a " hill of iron " 600 feet high and 4,800 feet long, in Durango, is the most famous deposit of that metal.

The activity in all classes of mining in Mexico has been very marked, and possesses an entire literature to itself. The subject is an almost unexhaustible one. There are lodes on every hill, in certain regions both explored and unexplored, and no land offered a more alluring field for the prospector before the recent disturbances.

Mining law in Mexico, as in most of the Latin American republics, is relatively simple, and imposes a minimum burden upon the prospector and miner. The unit of claim is the *pertenencia*, of 100 metres square, or one hectare, equal to 2.471 acres. There is no limit to the number of claims that may be made. The first act on taking up the claim is known as the *denouncement;* or a prospector may first take an exploration permit, which gives him two months' right for prospecting an area comprised within a circle with a radius of 500 metres, from any central point upon which he may fix. This operation, however, involves the danger of clashing with older properties, and ordinarily the prospector simply searches the ground until he finds a vein or lode, which he then " denounces." At the nearest revenue stamp office he takes out a certificate, depositing five dollars, equal to ten shillings per *pertenencia*. The government mining agent then records and further stamps this document, the other fees are paid, and a surveyor appointed within two months. If approved, the denouncer is given a certain time to mark out his claim with rough stone monuments. The total time required to secure a title is about six months, and development work may proceed during the period. The annual tax is three dollars per *pertenencia*, and as long as the tax is paid the property is held. All mineral rights in Mexico, as in Spanish America generally, are the property of the state or nation, and are regarded as leased, the ordinary land title not giving possession to minerals, nor can the private owner of land hinder prospecting, except in certain positions. Formerly this was not the case, and the estate owners imposed obstacles and onerous burdens upon the prospector and

miner, so that the existing law was a measure of reform. The mine is bounded by the area of the claim, and a lode or vein cannot be followed outside, as in other countries.

The oilfields of Mexico are of great importance. In the year 1910 Mexico imported 1,000,000 barrels of crude and refined oil, but in 1911 exported more than 700,000 barrels, part of an output of several millions of barrels. One of the most remarkable flows of oil in the world was opened in the state of Tampico. Oil began to flow in November, 1910, and continued for several months before it could be brought under control. So vast was the pressure and volume of the oil that when the iron valves were afterwards opened to test the pressure the jet of oil rose to a height of 300 feet in the air, with a flow of 105,000 barrels in twenty-four hours. Later it took fire. Mexico is one of the foremost oil-producing states in America, and British and American capital is largely interested in the production. During the war there were serious difficulties. The embargo by the government on the Mexican Eagle Oil Company—a leading enterprise—was withdrawn only at the end of 1920. This company has a capital of 160,000,000 Mexican dollars: it yielded 30,000,000 barrels of oil in 1921 and paid a dividend of 30 per cent. Trouble has resulted upon the entrance of sea-water into the wells, in certain districts.

The utilisation of hydraulic power in Mexico has advanced rapidly in certain districts. Upon the Conchos river, some fifteen miles from Santa Rosalia, in the state of Chihuahua, a dam has been under construction for several years with the purpose of deriving 40,000 horse-power from the river, capable of extension to 90,000. This power it is designed to furnish electrically to mines and mills within a considerable radius, including Chihuahua and the important mining centres of Santa Eulalia, Santa Barbara, Parral, and others. The falls of Junacatlan, near Guadalajara, are already utilised; and a very important hydro-electric installation at Nexaca exists. In numerous parts of the republic, north and south, water power and hydro-electric stations have been installed and are a source of great value to industry.

Mexico cannot in general be considered a manufacturing nation, but it has some claims in this respect. The sugar and cotton industries have been mentioned earlier and are an important feature of national industry, and their future development is likely to render the country entirely self-supplying in sugar and textile fabrics. The cotton industry, both as to growing and manufacture, is protected by a high tariff, and other inducements are made in order to encourage export. The clothing, both of woollen and cottons of the working classes, is supplied, and good blankets, shawls, carpets, calicoes, and other fabrics are plentifully produced. There are over 500 flour mills, and seven iron and steel works, including the great plant at Monterey; ninety ore smelting works, and numerous tobacco factories, potteries, tanneries, breweries, and all the other usual trades in considerable number. The policy of the government is to encourage national manufactures; large amounts of foreign capital went into the country with that object in view, and skilled operatives from abroad, and Mexico is an example of a people who might render themselves to a large extent independent of the products of other countries (see note, end of chapter).

Apart from the railways, means of communication are difficult in Mexico, which is a country of very few and poor roads and, in general, of unnavigable rivers. The railways of Mexico have become of great importance during the last thirty years. The aggregate length of line in the republic is more than 15,000 miles. The recent railway policy of the government has been to prevent absorption of the trunk lines by North American Trusts; and state control of some of the principal railways has been brought about by the method of acquiring a controlling bulk of the shares. The first important railway in the country was the line from Vera Cruz to the city of Mexico, completed in 1873, financed and built by a British company under subsidies from the Mexican government, elsewhere described. The capitalisation of this enterprise was 46,000,000 dollars, and a good profit has been reaped from its operation. Great topographical difficulties were overcome in ascending to

the Mexican plateau from the Gulf coast, the altitude of 7,925 feet above sea level being reached: and the line is 263 miles long between Vera Cruz and the capital, with heavy gradients involving the use of special double-ended locomotives. The Ferrocarril Interoceanico is the second line from Vera Cruz to the capital. Two main trunk lines extend from the United States frontier, along the plateau to the city of Mexico, thus establishing efficient communication between the cities of both republics. The train journey from New York to the Mexican capital occupies somewhat more than four days and nights of continuous travelling. The longer of the two lines is the Mexican Central, running from Ciudad Juarez, opposite the Texan town of El Paso on the Rio Grande, 1,225 miles long; and the second the Mexican National, 800 miles, from Laredo to the capital. These lines were built by United States capitalists, subsidised by the Mexican government. The Mexican International railway runs from the American border, at Eagle Pass and Ciudad Porfirio Diaz, across the great plateau to Durango, and is being extended to Mazatlan on the Pacific coast. The Mexican Central railway has branches to Tampico, on the Gulf coast, and a line is under construction to the important seaport on the Pacific coast. There is also a line to Mazatlan, and one from Monterey to Tampico. During the war the Mexican Railway was sequestrated, and only in 1921 returned to its owners.

The "National Railways" of Mexico were incorporated in 1908, to consolidate the Mexican Central and the Mexican National and some other lines, with a capital of 460,000,000 dollars; and later the International and the Vera Cruz and Isthmus railroad, the Interoceanic and the Mexican Southern were absorbed, the whole involving nearly 12,000 miles of line. The government has a controlling interest in the huge capital stock of this undertaking, and thus is master of the trunk lines of the republic. Much more economical working has resulted from the fusion, and the full dividend was paid on the first preference stock in 1911 —an improvement on earlier finance, which for long was extremely unsatisfactory. The Interoceanic railway earned

gross receipts for the year 1911-12, of nearly 9,000,000 Mexican dollars, leaving, after working expenses were deducted, net receipts equal to £333,000. Nearly all the locomotives on the system have been converted into oil-burning engines, with a considerable saving over coal fuel.

The most important transcontinental railway of Mexico is the Tehuantepec line, across the isthmus of that name, which crosses the water-parting of the continent at an elevation of only 735 feet above sea level. The railway is 192 miles long from Puerto Mexico or Coatzacoalcos, on the Gulf side, to Salina Cruz on the Pacific coast, and a large outlay has been made in the constructions of docks at the two ports. The railway was a national undertaking, but was reconstructed by and leased to a British firm ; and the total cost of the line and new docks was £13,000,000. A branch line from the Tehuantepec railway gives communication with the capital, and with Vera Cruz. The Tehuantepec railway is of much importance internationally, as affording a rapid isthmian route for passengers and merchandise across the continent ; and there are steamship lines operating between its eastern and western termini respectively and the United States and Japan. The carrying trade of the Tehuantepec line has grown considerably of late years, the trans-isthmian traffic competing severely with its rival the Panama railway. At the beginning of 1907, when the line was first available, the value of the traffic was 11,500,000 dollars, which grew in 1911 to 73,750,000 dollars. Thus it is seen that the Tehuantepec railway has acted as a great trade stimulus, but what the effect upon it of the opening of the Panama canal will be cannot be forecasted.

The two great outlying parts of Mexican territory—the peninsulars of Lower or Baja California and of Yucatan, at opposite extremities and different sides of the country, are much isolated from the general life of the nation, having no communication by railway. Lower California is an immense tongue of land, 900 miles long and 100 broad in places, paralleling the Pacific coast, with 100 miles of open water between it and the mainland. It is largely of an

arid nature, but contains many valuable mineral deposits, and other elements, the use of which doubtless the future will reveal. Yucatan is the remarkable flat, forested, limestone peninsular, reaching out and forming the south side of the gulf of Mexico, also a riverless land, but containing in the strata of its formation singular natural wells and underground streams. It is the seat of the great henequen industry, and is famous for the strange ruins of the Maya civilisation, described in the following chapter. There are short lines of railway connecting the port of Progreso with Merida, the capital, and other points. Quintana Roo, the adjoining territory, is still the home of independent Indian tribes.

The foreign trade of Mexico formerly revealed a generally steady growth, with a balance in favour of the republic. The annual value of the exports before the war was £30,000,000. The imports were £18,300,000, a falling-off of £2,500,000. The national revenue was estimated at £10,350,000, yielding a surplus over expenditure. Recovery at the present time is slow.

Owing to favourable conditions of transport largely, both by land and water, the United States enjoys the major part of the foreign business of Mexico. The proportions of the imports as regards American and European traders shew how considerable is the predominance of the United States. For the years 1909-10 the proportions were : United States 60 per cent., United Kingdom 11.5 per cent., Germany 10.5 per cent., France 9 per cent. These have shewn fluctuations since 1905, when they stood at 66, 9, 9.4 and 7.4 per cent. respectively. The Canadian imports into Mexico grew from a nominal amount in 1905 to 1.2 per cent. in 1910, but have since shewn a decline. For the year 1911-12 the imports from the United States were of a value of £9,842,000 ; from Germany £2,384,000 ; from the United Kingdom £2,147,000 ; and from France £1,566,000. The United States were therefore greatly in the lead.

The influence of the United States on Mexico is very considerable, even if, as has been elsewhere observed, the American individuality does not exercise much influence on the strong Spanish personality of the educated Mexican.

Photo *Underwood & Underwood*

NATIVE GIRLS OF TEHUANTEPEC

The proximity of Mexico to the United States, and the relatively abundant means of railway communication between the two republics, naturally lead to constant interchange of visitors and commercial and tourist traffic. During the regimen of President Diaz, in the last decade of the nineteenth and the first of the present century, the attitude of the American towards the Mexican underwent a profound change. Before that period the American held his southern neighbour in a certain amount of contempt. Socially he knew little of him, except that he was a stubborn fighter who, in that respect—notwithstanding the American invasion of Mexico in 1849 and subsequently, and the hoisting of the stars and stripes in the Mexican capital—he could by no means despise. The knowledge each people had of the other was gained principally from the frontier character. Mexicans were popularly known as "greasers," in Texas and the other western states, to the American; whilst the latter was an arrogant and vulgar "yanqui" in the Mexican estimation, with little knowledge of the arts and bearing of the *Caballero*. The man from New York, Chicago, St. Louis, or San Francisco knew little of a distinguished, polished race who dwelt in a beautiful capital near the extremity of the continent: a city which, when he had discovered it, he dubbed the "Paris" of North America, and freely visited it to escape the severe winters or suffocating heat of New York and Chicago; made of it a health resort, and associated with its fair daughters; that is when entrance could be gained into the bosom of the Mexican family, which was not always the case, as no more exclusive race exists. The American was obliged to content himself—and that was indeed his real business in Mexico—in taking up concessions for railways, mines, factories, and rubber lands, or in opening an office for the sale of machinery or other commodities. The Mexican, being as a rule much more a man of the world than his so-called "cousin" from the north, who, although an energetic and well-meaning element generally, did by no means as a rule represent the best of his nationality, fully comprehended the character of the "Americano," welcomed

the inflow of his gold, and made him at home in many ways, except perhaps socially. He gave him valuable concessions, and, taking his tone from the deportment of the powerful Diaz, with his progressive policy, strove to bridge over that hiatus between the two people which a former president, Lerdo, had striven to maintain, in his dictum of: "Between weakness and strength—the desert!" In the first years of this century there were more than 15,000 Americans in the republic, a total greater than all other foreigners, except Spaniards, combined. A spirit of strong, commercial friendliness grew up, more or less underlaid in some cases by less agreeable sentiments—for a certain class of Mexicans have never forgotten the annexation, by the United States, of the huge territories of Texas and others in the year 1845. Furthermore, there was always a strong party who saw a menace to Mexican nationhood in the lavish encouragement of American capital and people into the country. The church party and the more conservative element, and the aristocratic older families, regarded the modern American invasion with extreme dislike and distrust. The often common and undistinguished demeanour of the man from the north was something they could not forgive, and to them it outweighed his good qualities. But this element—which, if it could have had its way, would have taken Mexico back to the social condition of the Middle Ages—was outweighed by the "progressive" forces, and perforce remained inoperative. The American, for his part, learned the polite national salute of his Mexican acquaintance in the streets, and upon entering office or counting-house—customs generally foreign to him—and indeed grew to regard the country with affection; and he often settled down in Mexico and even married among the people. Little but what is good resulted from the approach of the two dominating North American peoples. But at the present time the political disturbances of Mexico have interrupted the growth of the entente. Mutual respect which was being built up has unfortunately been destroyed by lawless Mexican behaviour. The commerce between the two nations is far greater, it is seen, than between Mexico and any European country. Mexico, however,

still looks towards France as the land of her ideals, and to England as the home of morality in commercialism and leadership of social advancement; and both English and French are very widely spoken by the educated Mexican.

The Mexican republic, up to the time of the deposition of Diaz, had for ten years shewn an accumulation of budget surpluses, aggregating more than £13,500,000. This large sum arose out of domestic administration alone, during the administration of the clever financier Señor Limantour, distinct from items of extraordinary expenditure, such as railways and public works, etc. The figures of the Mexican budget before the war shewed an estimated revenue of £11,153,400, and estimated expenditure of £11,152,700. It is thus noteworthy that, despite its political troubles and revolutions, the Mexican treasury balance was maintained, and public finance continued its course but little impaired, as far as those returns shew; but conditions have altered.

Several causes operate against the more rapid development and advance of the Mexican nation: the turbulent political and revolutionary element, which it had been hoped was stamped out, but which has re-acted; the too considerable influence of the church and the priestly regimen; the relatively slow growth of education, and the monopoly of the wealth of the country in the hands of a few. The main bulk of the Mexican people own no property, carry on no remunerative industry, and do not labour under conditions productive to themselves. These circumstances are reflected in the low taxable capacity of the population, and the decline of national prosperity in times of commercial depression or political disturbance. Whilst the conditions of the lower classes of Mexico are extremely backward, some considerable improvement was made during the long Diaz regimen. Before that period indolence and crime were more marked; the roads were infested with brigands, and revolution succeeded revolution with a frequency not attained in any other Latin-American state. Near the close of the period the country enjoyed internal peace and excellent relations abroad, and the development of railways

and mines under the stimulus of foreign capital had reached a height never attained before. This development produced much greater wealth for the community on a whole, but the benefits which have filtered down individually to the peon and lower classes generally are relatively small. The amount of foreign capital and large number of expert foreign operatives that entered the country, and established manufacturers under the Diaz regimen, were not without some effect on the character of the Mexican generally. The political disorders in Mexico are the legacy of long years of misrule of various kinds, the misrule of politicians, the misrule of a governing class which monopolised the land and means of production, and lastly of that peculiar form of misrule which thought to find in the material progress of a capitalist class, and the advent of foreign enterprise by the road of the concession hunter, the principal method of betterment for the community. There is a certain element of Mexicans who were always lawless, impatient of any political control, and ready under small pretext to plunge the country into revolution. But the bulk of the Mexican people are not lawless by nature, and suffer by reason of the small lawless element. The educated upper class, the people of Spanish blood, are generally peaceful and enterprising traders ; and the mestizos, forming the body of the nation, ask nothing more than to work and prosper ; whilst the great peon class are docile and without initiative for creating political disturbance.

NOTE.—The favourable conditions in Mexico have been seriously reversed during the decade since this book was first published. Foreign property has been commandeered and foreigners ill-treated, in some cases assassinated or driven away; presidents and ministers killed, and economic life ruined. However, in 1922 better conditions appear: the customs revenue is the largest known: an agreement has been entered into to cover the foreign debt in securities, etc., of £140,000,000, by oil and railway taxes.

CHAPTER XIII

THE AZTEC AND MAYA ARCHÆOLOGY

Mexico and Central America form, archæologically, a region of great interest, not inferior in this respect to Peru and Bolivia. This portion of America was the home in pre-Hispanic times of several distinct but connected civilisations, whose evolved or derived cultures and building powers were the admiration of the first European adventurers, and to-day are subjects of deep interest to the antiquarian. It is not the purpose in this chapter to enter into a full description of these ancient civilisations, but to provide a few broad details concerning the existing structures and remains scattered throughout the region. The state of civilisation existing at the time of the Conquest has not been without exaggeration, both by the Spaniards, who strove to represent the things they encountered in high colours to their monarch and countrymen, and also by later writers. The great bulk of the early Mexicans lived—as many of them do to-day—in huts of mud or reed ; and the stone buildings, whose beauty and ingenuity need no exaggeration, were structures of a special nature.

The valley of Mexico was the seat of the Aztecs and kindred peoples, themselves successors to the far more ancient Toltecs ; evidence of whose arts exist in the great pyramids encountered in different parts of the region, such as those at Teotihuacan, slightly north of the city of Mexico, Papantla, Cholula and others. South of this region lies the seat of the Zapotec culture, with the remarkable ruins of Mitla as its centre ; and still further south, in Yucatan, Chiapas, and the republic of Guatemala, the Mayas and Quiches flourished, and left to posterity the extraordinary

pyramid-temples and objects of sculptured stone which to-day stand amid the jungles and forests of those regions. The monuments of these ancient civilisations cover a very large range of territory, and the extent and variety of the remains are such as have supplied material for an extensive literature. The Toltec pyramids in some cases rival in size the pyramids of Egypt, and in certain points of construction the stone-built halls of the Mayas have no superior among the ancient structures of the world. The early civilisations of Mexico and Central America present the same problem of origin or development as those of Peru. Recent excavations at Teotihuacan shew that various culture periods followed each other in Mexico as in Peru. The Mexicans had not the remarkable land laws and social system of the Incas, but they were more advanced in the evolution of a "literature" in their picture-writing. In their religion also, they were not without some vision of an unknown God. Whether the early Peruvian and Mexican cultures were indigenous—the result of the national reaction of man to his environment—or whether they were offshoots of Old World cultures are problems which have occupied much attention, but which are still unsolved. Both aspects of the question have their adherents. Of the Toltecs little is known. The Aztecs were in their full prosperity when the Spaniards under Cortes arrived, but the Mayas were more or less decadent. Whatever may be the truth regarding their origin, the culture they displayed must have taken an equal time to develop with those of the Old World. The tendency exists among anthropologists to admit a common origin, if very remote, between the tribes of Tartary and America: and the resemblance may be noted by any traveller. This, however, may be a circumstance apart from any relationship in culture origin.

The northernmost monument or ruin of the pre-Hispanic people in Mexico* is that at Quemada, in the state of Zacatecas, consisting in the remains of a stone building of some

* The archæology of Western North America, Mexico, and Peru is described and illustrated in the author's book, "The Secret of the Pacific." T. Fisher Unwin, London, 1912.

considerable extent. North of this the remains are mainly of adobe, such as the remarkable ruins of the great community house of Casas Grandes, upon the United States border, near Ciudad Juarez. Far to the north of the border, in Arizona, Utah and Colorado, are the famous stone buildings of the Cliff-Dwellers, which have much in common with the more primitive works of the Aztecs of Mexico, and their contemporaries or predecessors.

It is to the Toltecs—a vague and shadowy people of whom more is conjectured than really known—that the most striking monuments north of the city of Mexico are attributed: the famous pyramids or *teocallis* of the Sun and the Moon at San Juan Teotihuacan, in the valley of Mexico; and this great Egyptian-like structure is the chief riddle of early Mexico. The pyramid of the Sun is 700 feet long on the base and nearly 200 feet high, and exploration and restoration work has been carried out of late by the Mexican governments. The structure is perfectly oriented; its principal side to the east. It consists in four terraced portions, and is truncated: and upon the summit platform, tradition states, an image of the sun-god, with a burnished gold plate upon its breast, flashed back the rays of the rising sun.

In the national museum of the city of Mexico are preserved a large, interesting collection of objects, mainly of sculptured stone, of Toltec, Aztec and Maya origin. Principal among these is the famous Calendar stone of the Aztecs, or sun-stone, a beautiful and massive monolith of carved basalt, circular in form, and twelve feet in diameter. The stone was both a sun-dial and a calendar, such as the Egyptians and the Chaldeans used, and the procession of cyclical animals carved thereon, and other characteristics, have given rise to the assumption by various authorities—among them Humboldt—that the chronological system which produced the stone must have had some connection with that of the Tartar zodiac, and possibly the Chinese and Indian astronomical systems. A translation of a hieroglyphic on the stone has given its age as from the year 1479 A.D.; but it must have been a copy of a previous example, handed

down or evolved through thousands of years. Other remarkable objects are the sacrificial stone, nearly nine feet in diameter, circular, and beautifully sculptured with figures, from a block of trachyte. Upon this stone the human victims in the appalling religious sacrifices of the Aztecs were butchered, their breasts cut open with obsidian knives and the still-beating heart torn out and flung before the statue of the war-gods, in the temples on the summit of the *teocalli* or pyramid. Most terrible and repulsive of all the idols which have been recovered is that of Coatlique, the woman-god, or goddess of the dead, a figure which it is supposed was placed on the summit of the *teocalli* of the capital, as it was found buried in the great plaza of Mexico city. It is also of trachyte, eight feet and a half high, carved with a skirt of serpents, and half-human head and hands. This striking and repulsive idol is preserved in the museum, along with many other objects of almost equal interest, including various other huge sculptured figures, in some cases presenting features curiously "Egyptian" in character.

Others of the well-known pyramids and mounds of Mexico are those of Papantla, near Vera Cruz, remarkable for its likeness with similar works in the Old World: Xochicalco, a small structure of elaborately sculptured stone, and Cholula, larger than the pyramid of Cheops, measuring 1,440 feet on the base, but much deformed by time.

Further towards the south, in the state of Oaxaca, lie Monte Alban and Mitla. In the first named, entire crests of hills have been cut away to form terraces on the summits, and pyramids, courts and quadrangles constructed thereon; and the work, like that of Teotihuacan, must have called for an astonishing display of power by their constructors, and involved the labour of a numerous population: doubtless under the mandates, for generations, of Mexican Pharoahs. The beautiful ruins of Mitla are still in a fine state of preservation, and exhibit an extensive series of halls, walls and doorways, great monolithic columns and lintels, and highly-sculptured façades. The Hall of the Monoliths is 125 feet long, with a row of columns down the centre formed of

CALENDARIO AZTECA O PIEDRA DEL SOL
EN EL MES DE DICIEMBRE DEL AÑO DE 1790
AL PRACTICARSE LA NIVELACION PARA EL NUEVO
EMPEDRADO DE LA PLAZA MAYOR DE ESTA CAPITAL
FUE DESCUBIERTO ESTE MONOLITO Y COLOCADO
DESPUES AL PIE DE LA TORRE OCCIDENTAL DE LA
CATEDRAL POR EL LADO QUE VE AL PONIENTE
DE CUYO LUGAR SE TRASLADO A ESTE MUSEO
NACIONAL EN AGOSTO DE 1885.

Photo *Underwood & Underwood*

THE AZTEC CALENDAR STONE, MEXICO

shafts of trachyte, twenty feet long and in some cases weighing twenty tons, which were quarried five miles away in the hills 1,000 feet above the site of the buildings, and transported thereto by methods which can scarcely be conjectured. Some column-stones still remain in the quarry unmoved. The most striking features of Mitla, however, are the richly carved and fretted walls, interior and exterior ; * a beautifully executed "Greek" pattern or geometrical design, in which is traced the square or zig-zag fret and "stepped" pattern encountered from Arizona to Peru, and on textile fabrics throughout Mexico and Peru, and even among the Indians of the Amazon and of Panama ; and such as is figured on Japanese and Chinese sculpture, and is, in brief, a common ornament throughout the world. With this, and in its world-wide occurrence, is associated the familar device of the Swastika. Mitla is one of the greatest archæological mysteries of the world, and it is conjectured that it was the abode of some peculiar religious sect, possibly of a character such as is revealed in Buddhist lands.

South, or rather east, of Mitla begins the archæological region of Central America, the home of the Maya and Quiche cultures. In some respects the extensive series of halls and pyramids there encountered—which astonished Europe when they were discovered, and which still excite the admiration of the traveller—are the most remarkable in the New World. They protrude from the jungle which has overwhelmed them, like fairy places, the creation of myths rather than actual fact. The principal of these ruins lie in the north of the peninsular of Yucatan, known as Uxmal and Chichen Itza, followed by those of Palenque in the state of Chiapas, and Quiriguá and Copan, across the border in Guatemala, with other numerous remains scattered throughout Central America. Some represent the ruins of entire cities which once flourished there, others of single structures. They comprise pyramids with temples on the summit platform, reached by staircases ; sometimes built of adobe, but in general of stone with a covering of carved slabs ; halls, quadrangles, galleries,

* Illustrated in "The Secret of the Pacific," *ante*.

dwellings for priests, subterranean works, "tennis courts"—for in these structures the early Mexicans played a ball game with an india rubber ball; also sculptural figures, friezes, stairways and other matters; and at Copan and Quirigua great carved stelæ, and enormous stones sculptured in the form of reptiles. Uxmal contains five great groups of structures: vast halls of stone, with facings and decorations executed with great skill. The buildings are generally rectangular in form, with one or two stories, having roof-crests of remarkable shape which give an appearance of great height. The interior construction is that of the Maya "arch" or rather vault, for the true principle of the arch was unknown in early Mexico as in early Peru. Among the chief buildings is the "Temple of the Magicians" so-called, upon a pyramid 240 feet long on the base, with a wide stone stairway leading to the summit, upon which are situated the vaulted chambers. The "Nunnery," the "House of the Turtles," the "House of the Pigeons," the "Governor's Palace" are other structures at Uxmal of a somewhat similar character. They appear to have been communal dwellings for priestly orders. The feathered serpent, well known as an early Mexican or Mayan emblem, is constantly sculptured upon the walls and columns, in the mytho-æsthetic motive of the decorations.

Chichen Itza is scarcely less noteworthy. There are eight principal bodies of ruins, grouped round two natural flowing "sacred" wells, the *cenotes*, which exist in the singular limestone formation of Yucatan. The beautiful façades of the temples and halls of Chichen reveal singular designs, in which some archæologists have endeavoured to prove Indian, Bhuddist, Japanese and Egyptian traits. The largest well is 350 feet long. The "Casa de Monjas," one of the principal buildings, is of three storeys, and includes the "Caracol," a small round structure; also "El Castillo," an ornate temple on the summit of a peculiar pyramid 200 feet on the square, and seventy-five feet high, adorned with serpent pillars; and another temple-pyramid with caryatid figures; also a tennis court and the "Temple of the Tigers" with coloured reliefs.

The exquisite execution of this work gives rise to the question, as it does with regard to the trachyte figures in the Mexican museum, of how such work could be performed without the use of steel tools: and how buildings of so excellent a form of construction could be built without—presumably—any instruments of precision. Buildings are true and plumb and scientifically formed.

At Quiriguá in Guatemala, in a valley which has been described as "a sheltered tropical paradise," and scattered over an area of some 200 square miles, are the remains and monuments of the Mayas; mounds, monoliths, graves, buildings; silent witnesses to a bygone people, and the centre of some strange old civilisation. The principal monuments are the great sculptured stelæ, or vertical shafts of stone, still standing in their original position. These are of sandstone, the carving in low relief, exceedingly ornate, the tallest being twenty feet above the ground, and probably ten feet below, and five feet square. They are remarkably well preserved,and,are maintained by the government as public property. Some are carved with the faces of women, others with hieroglyphics, and upon some figures the "sphent" or headdress of the Egyptian is observed, or at least some have traced the similarity. The ruined city of Quiriguá lies in the heart of the jungle, but must have formed a metropolis in pre-Hispanic days.

Guatemala was the centre of the great Quiché nation, which was ruthlessly destroyed, like the Aztecs and the Incas, at the time of the Spanish Conquest, but various valuable documents remain, which throw some light on the religions of the people, including the famous Popol Vuh, containing the Quiché version of the creation of the world, and of some great migration.

Copan lies in Honduras, and contains ancient sculptured buildings and terraced structures, which have been made the subject of a good deal of archæological investigation, and from which some examples of carvings are in the British Museum. In other parts of Honduras are ruined pyramids, terraced stone mounds, ramparts and other ancient works, which extend into Salvador and even to British Honduras,

but appear to terminate at the borders of Nicaragua and Costa Rica. At Chiriqui, in Panama, however, a notable ancient art in metal-craft flourished, as shewn by the objects recovered.

In Colombia there are also traditions of earlier civilisations and remains of works, in the form of roads and other matters, and taken with Ecuador and Peru it is seen that the ancient civilisation of America flourished with more or less intensity throughout a region extending over 70° of latitude, or nearly 5,000 miles. From Babylon to Egypt, from the civilisation of the Euphrates to that of the Nile, was but a thousand miles, and thus the ancient civilisations of America were spread over a wider area than those of the Old World. What the connection between ancient Mexico, Central America, and Peru was, it is at present impossible to say, but it would seem reasonable to suppose that all these cultures had a common basis, although they may have become separated later. It cannot be doubted that, as increasing attention is directed to Latin American archæology, the problems of origin and development of these early civilisations will be solved. The structures themselves are of the utmost interest, and fuller measures should be taken for their preservation.

CHAPTER XIV

CENTRAL AMERICA

GUATEMALA, HONDURAS, BRITISH HONDURAS, NICARAGUA, SALVADOR, COSTA RICA, PANAMA

The region collectively known as Central America is one of the most interesting portion of Latin America, and embodies six independent republics and the British Colony of Honduras. Geographically it is taken as extending from Panama, to Tehuantepec in Mexico, but politically the southern boundary of Mexico is the limit of the region. These six Central American republics have much in common as regards their physical formation and inhabitants; although each is stamped with its own individuality, and jealous of its rights. Guatemala, Honduras, and Nicaragua cover respectively areas of 48,000, 46,000, and 49,000 square miles, and the smaller republics of Salvador, Costa Rica, and Panama cover 7,200, 23,000 and 32,000 square miles respectively. British Honduras covers 7,562 square miles.

Central America, physically, may be regarded as a transitional zone of territory connecting the continents of North and South America, rather than being part of either. It is a region of mountains and lowlands: the mountains having many high plateaus of limited extent, and containing many volcanoes, which form some of the highest summits and are among the most destructive on the earth's surface. Among the principal of these volcanoes six are in Guatemala, two in Salvador, four in Nicaragua and four in Costa Rica. Guatemala and Salvador are countries possessing more volcanoes than almost any other, and throughout the whole history of Central America, up to present times, these

countries have suffered greatly from eruption and earthquake, with repeated overwhelming of cities and destruction of plantations. The geological formation of the Central American region has been greatly influenced by volcanic disturbances in past ages. It forms, as it were, a joint in the earth's crust, a weak point subject to the outburst of the forces within. In earlier geological times, it has been shewn, the Atlantic and Pacific oceans were connected by various straits across what now are the narrow necks of land of Central America, the region having constituted a great insular system which has been consolidated in later times. Thus the cutting of the Panama Canal may be regarded, in a sense, as reverting to earlier hydrographic conditions.

Historically, Central America is of great interest. It was on September 1, 1513, that the Spanish explorer Vasco Nuñez de Balboa began his march across the Isthmus of Panama, and on the 25th, having ascended the range of hills forming the water-parting, that he stood " silent upon a peak in Darien "—silent at the sight of an enormous unknown ocean stretching away towards the west. This was the first view of the Pacific Ocean by the white man, from its eastern side. Four days later—it was Michaelmas day, 1513—Balboa waded knee-deep into the new ocean, tasted its salt waters, and cried aloud to his followers: " I take real and corporal and actual possession of this sea and its coasts for the king of Spain ! " It was an extensive claim to make. On the one hand the Pacific coast stretched northwardly for eight thousand miles through what is now Central America, Mexico, California, Oregon, British Columbia and Alaska, to where it touches the fringe of eastern Asia ; on the other, southwards for five thousand miles through Columbia, Ecuador, Peru and Chile to Cape Horn.

Although not an acre of this vast territory pertains to-day to the country whose agents discovered it, Spain has nevertheless left her imprint indelibly stamped upon it. The whole of Central America was formerly united in one political area. Under the rule of Spain, which came to

a close in 1821, the entire region from Mexico to Panama was embodied in a single administrative division: the kingdom of Guatemala, under a Captain-General, independent of the viceroyalty of Mexico and South America, and directly responsible to the home government. After independence was gained a federal republic of the five states was set up, which lasted until 1842, since when independent government for each republic has been maintained. Some attempts since have been made to consolidate the region politically again, but have not been carried out. Alliances and peace proposals, on the contrary, have generally terminated in strife and bloodshed, as if the people inhabiting the land partook of something of the turbulence of the volcanic region on which they have their being. As a whole these people may be credited with good intentions—the roads to their political and financial chaos are paved with such. A Central American "Hague Tribunal" or Arbitration Court was set up some years ago, under treaties signed by Honduras, Costa Rica, Guatemala, Nicaragua and Salvador, and meets when occasion requires judgment upon matters at issue between these various states.

The geographical position of Central America is one of extreme importance, and the whole region, including the Antilles and West India Islands, may in the future become the centre of an increased maritime and commercial movement; Central America forming, as it were, a bridge between the two great oceans, the Pacific and the Atlantic, and the two American continents: midway between Asia and Europe. Only the future, however, can show if this assumed importance will be compassed.

The Cordillera, or mountain chain, traverses the whole territory of Central America from end to end, except that it is broken by the great lake-basin of Nicaragua. The mountains lie, as in South America, much closer to the Pacific than the Atlantic, except that in Costa Rica and Panama they occupy the centre of those narrower territories. The eastern side of the region consists in broad plains and highlands, watered by numerous rivers. Central

America comprises some of the most fertile land on the earth's surface; and the landscape and scenery are among the most noteworthy, and the natural resources of the soil the most prolific of the whole of Latin America. The topography of the region gives rise to the vertical climatic conditions of Tierra caliente, Tierra templada and Tierra fria, or hot, temperate, and cold lands, a range of temperature from tropical to temperate which ensures the production of plant life of all kinds. The climate generally is healthy except in certain places on the coast, where lack of sanitary improvements and neglect of common hygienic conditions give rise to malarial fevers and worse disorders. In some zones, as at Panama formerly, and other ports on both shores of Central America, yellow fever was a terrible scourge, and malarious disorders rendered life for the foreigner unsafe. The improvements brought about at Panama, under the control of the United States, have shewn that these tropical scourges are not inevitable conditions of Central American environment.

The total population of the Central American republics numbers somewhat more than 6,000,000, distributed approximately as to 2,200,000 in Guatemala, 600,000 in Honduras, 740,000 in Nicaragua, 2,000,000 in Salvador, 460,000 in Costa Rica, and 400,000 in Panama. The estimates of population are very approximate. Accurate statistics cannot be obtained, partly by reason of the ignorance of the masses of Indians in certain regions, and largely by reason of fear of military conscription, or taxation, especially in Nicaragua and Honduras, both of which matters the inhabitants have good cause to avoid. In Guatemala 60 per cent. of the population are pure Indians; the remainder mestizos, with small class of whites. The Indian tribes are more diverse than in any part of Central America, and belong principally to the Maya and Quiche stocks, who in olden times were the builders of the famous Central American temples. There are about 15,000 foreigners in the country: and several important German coffee-growing settlements. In Honduras the mestizos are the most numerous, and the white element is small. There

are many Indian tribes, a portion of which are Christianised, but a number, of about 90,000, still retain their aboriginal mode of tribe life, living in the mountains and cultivating the soil. These Indians are good and industrious labourers. On the north coast the vigorous Carib race is found, forming the principal source of labour for mahogany-cutting. There is a considerable but disappearing number of zambos and negroes. In Nicaragua the population is largely of a composite character, formed by the union of the original Indians, Spaniards, and negro slaves. Intermarriage of immigrants of all nations, including Dutch, French and British, has produced a half-caste type with blue eyes and fair hair, an uncommon type for a Latin-American country. Indians of pure race are few, as they were almost exterminated in earlier times by the Spanish buccaneers and colonists. Salvador is the most thickly populated of the Central American republics. The mestizos or "ladinos," as the mixed race is commonly termed in Central America, form more than half the total; the Indians 40 per cent., and the whites and foreigners 10 per cent.; the pure whites of Spanish race not being more than 2½ per cent. There is a small proportion of negroes. In Costa Rica the proportion of Spanish blood is greater than in any of the six republics, but the mestizos form the larger proportion of the inhabitants. The native Indians, who number about 4,000, are of a quiet, docile nature, dwelling in stockaded encampments, in a still savage and unChristianised state. There are about 8,000 Europeans in the country. In Panama the population is extremely mixed, due to the labour of various nationalities brought in for the building of the canal. Negroes from Jamaica predominate, and Spanish, Italian and Greeks are plentiful. These, however, are not permanent elements. The population upon the canal zone numbers over 50,000; and there are 36,000 native Indians throughout the country.

The birth-rate in the Central American countries is generally a high one, and the death-rate low, and although there is little or no immigration the population tends rapidly to increase. The high excess of births over deaths

is a result of the naturally favourable conditions of soil and climate, added to the native woman's disposition towards child-bearing, characteristic generally of the Latin American people. In Nicaragua, Honduras, and Guatemala the increase in population, notwithstanding the constant political unrest, is very marked. A large proportion of the births are illegitimate, amounting to 30 per cent. of the whites in Guatemala, and 50 per cent. of mestizos and Indians. Guatemala was originally the home of the great Quiche nation, and of people of Maya stock, who had reached a high degree of civilisation, as elsewhere described.

The governments of the Central American republics are generally of the centralised system, the various countries being divided into departments, with *jefe-politicos* or political governors at their head. Single chamber government prevails, the legislative power being the Chamber of Deputies, and the executive power the President and Cabinet. The president and deputies are elected according to the constitution, by free popular vote ; but by reason of political influence, dishonesty, and intimidation, the result of free suffrage has become a mere travesty of the popular voice. The governors or *jefes* of the departments are appointed by the Central Executive ; the deputies are elected under the system of proportional representation, varying as to numbers in the different republics.

Education in the Central American states is generally extremely backward, and practically non-existent in certain regions. In Guatemala 80 per cent. of the population can neither read nor write, and the proportion varies little in the other republics. Primary education is free and compulsory. The most advanced community in this respect is that of Costa Rica, but the Guatemalan government is making strong efforts towards improvement. In all the republics the government supports the schools and educational establishments, but lack of funds and political unrest prevent the consolidation and growth of public instruction. The Roman Catholic religion prevails in every state, but other creeds may be in general practised with

liberty. There were 1,064 government schools in Guatemala in 1903 and a number of private schools; and the owners of plantations on which the labourers' children aggregate more than ten are obliged by law to provide schools. Two national institutes, one for men and one for women, exist in the capital, and at Quezaltenango and Chiquimula respectively; and for professional instruction in law, medicine and engineering there are private, government-aided schools; also a national conservatory of music, a commercial college, national library, and four schools of trades. There is also a German school, endowed by the German government. In all schools military training is given. Military service is compulsory for all white and mestizo citizens. Guatemala, in reality, makes considerable pretensions as to the education of its people, and at times enthusiasm is aroused on the subject; but the great bulk of the people remain illiterate. In religion the state recognises no distinction of creed, and monastic institutions are prohibited by law. The national Roman Catholic creed is, however, strong among the people, although a large section of the upper class have long been pronouncedly "liberal," as the anti-clerical element is termed.

The products of agricultural and forestal industries, as well as minerals in Central America, shew the exceedingly wide range of natural resources of which this rich territory is possessed. The chief plantations are owned by Germans, and the yearly product is worth about £1,500,000 sterling. Somewhat similar conditions of coffee-production prevail in Nicaragua, the German-owned plantations producing coffee of good quality. The coffee of Costa Rica is especially famous, the volcanic soil in places possessing peculiar properties favourable for the growth of the shrub. The development of the banana trade in various parts of Central America has become of considerable importance. Rubber planting has been successfully carried out in certain districts. Mahogany and cedar are valuable timber products, but the forests have been recklessly destroyed in some cases. Almost all the fruits of the tropic and temperate regions are produced, and cattle-raising is carried on and dairy products manu-

factured. Sugar and some cotton are grown, and alcohol distilled. Relatively considerable quantities of gold-dust and bars have been exported from Nicaragua, Honduras, and other states, most of which are rich in minerals.

In certain of the Central American republics, state lands for colonisation are to be obtained on easy terms, both under free grant and purchase. The Indians upon the plantations in Guatemala and other states live often in a condition akin to slavery: the truck system and peonage. under which contract debts are incurred, virtually tying them to their masters.

GUATEMALA

The republic of Guatemala is bounded on the north and west by Mexico, and on the east is cut off from the Atlantic ocean, except for a few miles of coast line and the seaport of Puerto Barrios, by British Honduras. To the east and south are the republics of Honduras and Salvador, and on the south-west the Pacific ocean.

The soil of Guatemala is largely of volcanic origin, and almost everywhere is fertile, yielding products which vary greatly according to the elevation of the land above sea level. Almost all products of the temperate or tropical regions can be grown to perfection within the borders of the country, from the finest cocoa on the Pacific coast zone, and bananas, logwood, and mahogany on the Gulf shores, to wheat, potatoes, and all kinds of sub-tropical fruits and vegetables in various parts of the temperate regions. The low-lying plains are clothed, especially on the Atlantic side, with a luxuriant vegetation, having all the characteristics of the tropical American woodlands. The chief commercial products are maize, sugar, coffee, cocoa, and cochineal. As in Mexico, maize is everywhere grown, yielding one crop annually in the temperate and cold zones, and two and even three in the hot coast districts. The sugar-cane flourishes up to an altitude of about 5,000 feet, which also is nearly the extreme limit of coffee culture; and cacao, properly a tropical plant, no higher than 1,600 feet. Wheat,

on the other hand, thrives on the uplands above 5,500 feet. In the lowlands and slopes somewhat higher, cotton, bananas, and indigo are cultivated, although not in large quantities. Cacao, sugar, and wheat and cotton are mostly consumed in the country, coffee and bananas alone being exported. The coffee plantations are situated chiefly on the lower slopes of the volcanic range facing the Pacific. This long tract of country, like the neighbouring district of Soconusco in Mexico, is remarkable for its scenery, fertile soil, and relatively dry and pleasant air; and many foreigners have settled in this maritime region and invested a good deal of capital in the coffee industry. The coffee plantations lie mainly between 2,000 and 4,500 feet above sea level and have hitherto escaped the attacks of insect pests, showing that here all the conditions are highly favourable for coffee culture. They have, however, suffered in some cases from the eruption of the volcanoes. The coffee crop has yielded annually 720,000 quintals. The plantations are chiefly in the hands of German settlers.

Other plants of commercial value are—vanilla, rubber, sisal, guava, ginger, oranges, cacao, cocoanut, banana, and plaintains, the last two being the most important. The cultivation of these fruits has been stimulated by government bounties, and the establishment of regular lines of steamships between Livingston and New Orleans. Of the 200 recorded varieties of bananas, two only, one red and one yellow, are raised for exportation. The former yields from 200 to 250 pods to the bunch, weighing unripe about 80 to 90 pounds. The plaintain, which greatly resembles the banana, but is much larger, is always yellow and rarely has more than thirty-six fruits to the bunch, the fruit being often more than a foot long, and more palatable and nutritive than the banana. When dried, this fruit, it is stated,* will keep for twenty years, and it has been calculated that a piece of rich land forty feet square will yield some 4,000 pounds of nutritive substance from plantains, capable of supporting fifty persons, while the same land under wheat would not support more than two.

* "Industria."

Among the forest growths of Guatemala are the mahogany and palm of the lowlands, and the pines and oaks of the uplands: one species of oak, which is smaller and much softer than the European variety, bears acorns "as large as the largest turkey eggs." Among the more costly woods are the cedar, a species of palisander, the so-called rosewood, and the palmolatla, a close-grained yellow wood streaked with grey and brown veins.

There is in Guatemala water power for future manufactures; and considerable, though little worked, mineral wealth. Gold, silver, lead, tin, copper, mercury, salt, sulphur, antimony, and coal are all found, but it has to be demonstrated that they are commercially exploitable.

The principal towns of Guatemala, with their populations are: Guatemala city 80,000, Quezaltenango 30,000, Totonicapan 26,000, Cobán 25,000, Sololá 20,000, Chiquimula 13,200, Zacapa 12,600, Escuintla 12,500, Sta. Cruz del Quiché 12,000, Salamá 11,000, Huehuetenango 10,800. The principal industries of which they are the centres, are native weaving, cattle-rearing, coffee, cereals, and tobacco-growing, and in some cases mining and small manufactures.

The capital cities of the Central American republics are in some cases handsome and pleasing in appearance, with conditions of climate and environment of much beauty and utility. Guatemala city is marked by a general air of prosperity. It is lighted electrically, and possesses well-built public buildings, wide, regular streets, and tree-planted avenues, broad plazas, numerous fine churches, theatres, museums, and a number of schools for both sexes. The houses are built low in order to minimise the danger from earthquake shocks, which have entirely destroyed the city in earlier years. The population is about 80,000 people. Guatemala city is by far the largest city in Central America. It is built upon a fertile, spacious tableland, 5,000 feet above sea level, and is surrounded by lofty mountains and volcanoes. The trade is mainly in coffee, and there are various cigar and textile factories. Among the manufactures fine cotton goods, muslin, silver articles, artificial flowers, and high-class embroidery have place:

the embroidery being a specially famous product of women's work in the city. Wood-carving is a native industry.

Access is gained to the capital by railway from Puerto Barrios, on the Atlantic, 200 miles distant, and from San José, on the Pacific, seventy-five miles. Guatemala is thus crossed entirely by railway, which forms a transcontinental route between the two oceans. The railway from Guatemala city to the city of Mexico has for some time been under construction, and now affords communication between the two capitals, and thus with New York and North America generally. The creating of railway communication across this little-known territory between Guatemala and Mexico is of much interest, and will doubtless lead to increased trade between the two countries.

The building of the present city of Guatemala, which is the third capital of the republic (the site of the first being known as Ciudad Vieja), was commenced in 1776, three years after the earthquake of 1773, which devastated Guatemala la Antigua, or Old Guatemala, the second capital. The latter is situated twenty miles from the present capital, at the foot of the volcano of Agua, and near the site of the earlier city, Ciudad Vieja, which was destroyed by a volcanic discharge from Agua in 1541, when a great flood of water was ejected from a crater lake, which overwhelmed the city. Besides the capital there are places in the interior which are noted for their historic associations. Such is Santa Cruz de Quiché,which stands in the neighbourhood of Utatlan, the capture of which in 1542 by Alvarado signalled the downfall of the great Quiché nation : and Totonicapan and Quezaltenango, places which have survived the destructive wars. The former is a thriving centre of peaceful industry, such as weaving, pottery, cabinet work, and musical instruments ; the latter, " the Green Feather town," still keeps alive some of the old national arts, and here are prepared the gold-embroidered cloaks, masks, and plumed headgear worn by the natives at their festive gatherings, which celebrate their ancient grandeur.

The total value of the agricultural productions of Guatemala amount to somewhat over £5,000,000 annually.

The value of the coffee was £1,117,000, of the maize £806,000, potatoes £103,000, sugar £375,000, rubber £57,000, chewing-gum and cocoa about £14,000 each, barley £156,000, timber £375,000, bananas, £75,000, and so forth. Of these native products articles to the value of £2,000,000 were exported in 1909, of which coffee accounted for £1,750,000, hides £62,000, timber £53,000, rubber £35,000, bananas £46,000, sugar £24,000, chicle or chewing-gum £14,000. Other tropical products of interest in Guatemala, and available in small but generally growing quantities are alfalfa, aniseed, broom root, carria, cocoa butter, tree cotton or kapok, beneseed, castor oil, ginger, marjoram, quinine bark, tiger skins, and myristina wax, and other varieties of cotton and wax.

The rivers of Guatemala are of some importance, as regards the eastern side of the country. The Motagua is 250 miles long, and is navigable to within ninety miles of the capital, and forms a delta on the south of the gulf of Honduras, an arm of the Atlantic; and the Potochic, 180 miles long, partly navigable. The Usumasinta is a noble stream forming part of the boundary with Mexico, and falling into the gulf of Campeche to the west of the Yucatan peninsular. The western slope of the country being short, gives rise only to small streams, numerous and rapid. Of the various lakes, Peten, about twenty-seven miles long, with the island of Flores, famous for the number of ancient objects of archæological interest which have been recovered from its soil, is the principal. The Golfo Dulce is about thirty-six miles long, a freshwater lake communicating with the Atlantic, and this would be of value as a harbour but for its bar. Lakes Aitlan, Amatitlan, and Guija are all of considerable size and interest.

The average rainfall of Guatemala is heavy, reaching, on the Atlantic slope, where the winds are moisture-charged from the Caribbean sea, 195 inches in places, but in the centre of the country it is about twenty-seven inches. The climate is healthy except where malarial fevers on the coast prevail; but Guatemala, and Central America as a whole, cannot be the subject of any generalisation as to climatic conditions.

GULF OF MEXICO
BAHAMA ISLANDS
ATLANTIC OCEAN
WEST INDIES
MEXICO
Gulf of Honduras
GUATEMALA
HONDURAS
BRIT. HONDURAS
CENTRAL AMERICA
NICARAGUA
COSTA RICA
PANAMA
CARIBBEAN SEA
JAMAICA (Br)
HAYTI
PORTO RICO
Virgin Is
LEEWARD Is
WINDWARD ISLANDS
Dominica (Br)
Martinique (Fr)
St Lucia (Br)
St Vincent (Br)
Grenada (Br)
Barbados (Br)
Trinidad (Br)
Tobago (Br)
Caracas
SOUTH AMERICA
Gulf of Panama
Havana
Matanzas
Cardenas
Progreso
Merida
Yucatan
Campeche
Peninsula
Belize
Tikal
Peten
Tomas
Cortez
Honduras
Omoa
Truxillo
Roatan
Ruatan
Champerico
Amatitlan
Quezaltenango
Salvador
Sonsonate
Sta Ana
Izalco
Segovia
Corata
Managua
Granada
Nicaragua
Bluefields
San Juan de Nicaragua
Nicoya
C Blanco
Limon
Aspinwall
Panama
David
Chiriqui
Bocas del Toro
Colon
Porto Bello
Chagres
Gorgona
Panama
Gulf of Panama
Cienfuegos
Trinidad
Batabano
Isla de Pinos
Jagua
Bahia Honda
Puerto Principe
Jaquimi
Jeremie
Baracoa
Gr Inagua
Andros
Abaco
Eleuthera (British)
Cat I
Long I
Gr Bahama I
C de Cruz
Santiago de Cuba
Manzanillo
Negril Pt
Savanna la Mar
Kingston
St Ann's
Morant Pt
Port Royal
Tiburon
Sole Trou
Gonave I
Jacmel
Jeremie
Aux Cayes
Port au Prince
Gonaives
Port de Paix
Mole St Nicholas
C Samana
Sanchez
Higuey
Arecibo
Aguadilla
Mayaguez
Ponce
San Juan
Santo Domingo
Puerto Plata
Dondon

NICARAGUA

Nicaragua is, territorially, the largest of the Central American republics, and second in point of population. On the Atlantic side the coast line of the country is 300 miles long, and on the Pacific 200 miles. The two great lakes upon the the western side are a distinguishing feature of the republic, and these formed part of the projected route of the once-discussed Nicaragua canal, put forward as an alternative to the Panama canal.

The principal interior towns of Nicaragua are Leon, the old capital, Managua, the actual capital, and Granada. These three towns are in direct communication with the Pacific coast by a line of railway about 170 miles in length. Managua has a population of some 45,000 people, and is the most important commercial place. It is well situated as an industrial town, and geographically is the centre of the republic. Managua is connected by rail with Corinto on the Pacific coast, and when the projected railway to Matagalpa, and that connecting the lakes with the Atlantic coast are completed, it will be brought into direct communication with all the important districts in the republic. The town has a plentiful water supply and an electric light installation. The department of Managua is small ; it produces coffee in the highlands, or Sierras, and sugar-cane in the lowlands, chiefly for distilling *aguardiente.*

Leon, with a population of about 63,000, is situated in the midst of some of the finest pastoral and agricultural land of the republic, and forms the distributing centre for the important coffee, sugar, and mining districts of Matagalpa, Chichigalpa, and Chinandega. Leon probably ranks second in importance among the commercial towns of Nicaragua, but, like Managua, very little of the foreign trade is in British hands. Granada, the chief town of the department of the same name, is the third largest city of the republic. The climate in this department, although tropical in the lower parts, is cool and temperate on the higher levels. The town is situated on the lake of Nicaragua, some thirty-six miles from Managua, and is in direct communication with the capital

by rail and road. The Granada district is an essentially agricultural one; coffee is produced on the slopes of the extinct volcano Mombacho, and beans, maize, and other crops. The department of Granada possesses the San Rafael sugar plantations, one of the largest of its kind in the republic, and at Nandaime there is a large cocoa plantation, the property of one of the great French chocolate manufacturers. The population of the town of Granada is about 15,000.

The department of Chontales comprises important mining and pastoral districts, and is well watered, being intersected by numerous small rivers which flow down from the highlands into the lake of Nicaragua. The ranges of hills in the centre of the department are favourable for the production of coffee and cocoa, but, owing to want of communication, only a small area is cultivated. A large part of the district is utilised for cattle-raising, and a business is done in exporting cattle to Costa Rica. The region is heavily wooded, but up to the present the timber has been but little exported. The department of Rivas contains some of the most fertile districts of the country. It lies between the lake of Nicaragua and the Pacific, and the chief town, Rivas, has a population of about 10,000. The principal products are cocoa, rubber, tropical fruits, and fine woods, such as mahogany, cedar, and hardwoods, which are shipped in considerable quantities from the port of San Juan del Sur. Large numbers of cattle are also raised in this department and exported to Costa Rica. In other districts yellow pine is abundant. The Prinzapolka district comprises the upper waters of the Prinzapolka river and its tributaries, and the northern tributaries of the Rio Grande. The whole district, is rich in mineral wealth, and there are several well-equipped mines producing gold, and many smaller ones, but all are handicapped by the difficulties of transport. Besides gold, copper and other metals are found in paying quantities. The highest mountain ranges of the country form the northern boundary of the department of Bluefields, and constitute the water-parting, dividing the northern part of Nicaragua.

In general, British enterprise has not been much attracted to Nicaragua, although a large amount of foreign capital is invested in the mines. The American trade has increased rapidly of late.

The exports from Nicaragua include a number of valuable articles, very diversified in character. For the year 1910 the principal of these articles were: coffee, 12,000 tons, at a value of £576,200, which went chiefly to France and Germany; cotton, to the United Kingdom almost entirely, sixty-three tons, value £2,260; hides and deer-skins, value £50,000; rubber, 285 tons, value £71,200, almost all to the United States; gold recovered in various forms, whether amalgamated, cyanided, smelted, or in bars, to a value of £183,000, principally to the United States; and a small amount of silver and auriferous copper; cedar to a value of £2,400, and mahogany, Brazil wood, and lignum vitæ in lesser quantities; also dye-woods—mora and nambar—worth £5,000; sugar £3,000; bananas £22,000, to the United States; cocoanuts and turtle-shell, of which last-named article a considerable quantity is, during some years, sent to Great Britain. The cotton, cocoa, rubber, and wood exports are far from representing either the production or the possibilities of the republic. In its mahogany and cedar forests, Nicaragua possesses great wealth; and as regards the injury done to the rubber forests in the past, steps have been taken by the government to remedy this.

HONDURAS

Honduras lies between Guatemala and Nicaragua, and has a coast line on the Caribbean sea more than 300 miles long, and on the Pacific a short seaboard of the gulf of Fonseca, with Amapala as the seaport. The capital of the republic is Tegucigalpa, with a population of about 40,000; standing at an elevation of 3,200 feet above sea level. It is connected with Comayaguela, its principal suburb, by a lofty bridge of ten arches over the torrential Choluteca river. The houses are generally of one storey, built round a *patio*, and fronting the park is the large domed and ornate cathedral. The government offices, university, law courts,

and schools of industry are other noteworthy buildings. There is only one small railway line in the country, and the roads are bad. A railway is greatly needed to cross the republic from the Atlantic to the Pacific, and from the capital to Amapala.

In Honduras fruit-growing and mining are both important industries. Of the export trade 40 per cent. is in bananas, for the growing of which there are vast lands available on the Atlantic coast, only a small portion of which is cultivated. The Honduras railway earns 85 per cent. of its revenue from fruit transport, and the steamers on the Ulua river are entirely occupied with the business. The great Cuyamel plantation, an American enterprise, is an important concern, with a large area of land, and a modern colony, railway, docks, and other equipment devoted to the growing and export of bananas. From Puerto Cortes, on the Atlantic coast, which serves the region, millions of bunches of bananas are shipped annually. The soil on this side of the country is also well suited for sugar-cane, but little planting has been done, although the finest kind of cane has been produced, and the home demand calls for greater production. Coffee and cocoa are equally capable of production, and lands are available at an almost nominal price. Similar conditions exist with regard to tobacco.

The chief industry in Honduras is mining. But although the mines have not yet been developed to any appreciable extent, there is sufficient proof of wealth in gold, silver, and iron. Coal and oil have also been discovered in several parts of the country, but have not been developed. A New York Mining Company is the only enterprise that has been seriously worked, and this has yielded some £3,500,000, with a capital of some £250,000. Water power is abundant in all parts of the country. The placer mines of the department of Olancho are also important and have yielded good profits. Honduras has been almost entirely neglected by foreign mining interests, but its great wealth is now attracting some attention abroad. Mines are worked by natives in nearly every department of Honduras, the ore being so rich

as to afford good profits even when worked by the most primitive methods.

There are openings for investment of foreign capital in Honduras in the mines, agriculture, and public works, and the government are anxious to attract foreign capital. There are immense undeveloped resources. The timber lands are valuable, and contain pine, oak, cedar, and mahogany ; and vegetable oils from the cohun nut, which grows in large quantities in the coast lands, should be valuable if exploited in quantities. The Atlantic coast lands are especially fertile and the Pacific lands produce excellent rubber.

The usual varied exports of Central American countries are represented by the following for Honduras, in 1911-12 : gold and silver £200,000 ; bananas £268,000 ; coffee £16,000 ; cocoanuts £35,000 ; mahogany £12,000 ; which, with other matters, and a few manufactured articles, gave a total value of £630,000. In 1909 the foreign debt of Honduras had reached nearly £22,500,000, of which £17,000,000 represented arrears of interest.

BRITISH HONDURAS

The British Crown colony of British Honduras, or Belize, being a foreign possession is outside the political scope of this book, but territorially forms part of Latin America. Physically it differs little from the Mexican peninsula of Yucatan of which it is topographically part, and its flora and fauna are those of the neighbouring republics. The littoral, facing the Carribean sea, is low and swampy, and the coast is of somewhat dangerous approach from coral reefs and *cayos*. Inland from the mangrove swamps and tropical jungle are belts of rich alluvial soil, pine-bearing ridges and broad savannas, with mountains beyond, and some sixteen streams or rivers descend to the sea. Good pasture land up to 3,300 feet above sea level exists, and there are indications of minerals. The climate is sub-tropical, and cannot be considered unhealthy in comparison with the West Indies and Central America generally. Larger than Wales, the country has a population of only 50,000 people, of which

about 2,000 are whites, the majority being of hybrid race descended from negro slaves, whites and aboriginals. The population increases very slowly, and 45 per cent. of the births are illegitimate. The land was at one time more thickly populated, under the prehistoric Indian civilisation which has left ruined cities in the jungle, as elsewhere in Central America. The coloured people are expert woodmen. It is recorded that all the pine trees on crown lands were sold to an American concessionnaire, in 1903, at the price of one cent per tree. Agriculture is neglected, only about 90 square miles of land being under cultivation. Sugar cane, bananas, cocoanut palms, rubber, palm oil, and other valuable matters are cultivated or collected, and could be produced in large quantities. There are no railways, and few roads. The capital, Belize, has a population of about 10,000 people. The total imports are of a value of about £450,000, and exports £400,000. The Colony is administered by a lieutenant-governor and an executive council of three official and three unofficial members. It cannot be said that the development of this territorial unit is in advance of that of its Spanish American neighbours.

SALVADOR AND COSTA RICA

The republic of Salvador lies wholly upon the Pacific side of Central America, and does not, like its neighbouring states, enjoy trans-continental facilities. A narrow seaboard of alluvial plains gives place to a plateau of 2,000 feet elevation, crowned by a number of volcanic cones. The river Lempa flows through a magnificent valley, and is navigable for small steamers for the third of its length, and falls into the Pacific. The capital, San Salvador, lies in a region subject to earthquakes, and the treacherous San Miguel, one of the most destructive burning mountains in America, after periods of repose at times bursts forth and causes devastation around it; and the phenomenon of unrest is shared by the lake of Itopango, which rises suddenly in its steep, trough-like bed; in which in 1880 a volcanic cone appeared, 500 feet in diameter. San Salvador, lies at an elevation of 2,100 feet, in the valley of Las

Hamacas, thirty miles from the Pacific coast, and has a population of about 65,000 people. It is connected with the Pacific ports of La Libertad and Acajutla by railway, and with Santa Anna to the north-west. A handsome university and others of the customary Latin American institutions mark out the city for distinction, and it may favourably be compared as a centre of life with small cities of Europe.

The principal industry of Salvador is agriculture; and coffee, sugar, indigo and balsam are the most important products. The "Peruvian balsam" is not cultivated in Peru, but is an indigenous balm of Salvador, and was so named from being first shipped to Callao and thence to Europe in earlier times. Rubber, tobacco, rice, cereals, and fruit are other products. Cotton-growing is encouraged by the government, which has established a model farm. Mining is principally for gold, whose output has reached during past years a value of £250,000; and silver, copper, quicksilver, and lead are found, also iron. The Salvador Railway Company, controlled by British interests, with a government subsidy, together with its steamers, is actively engaged in the development of the regions traversed by the line. The peasantry of Salvador are generally hard-working, and the general prosperity of the country is advancing.

Among the Central American states, it may be said that Costa Rica has the least sombre past.* The republic is fourth in area and population, but undoubtedly a larger proportion of the country is capable of immediate utilisation, and the population, Galician by origin, is the most European and the most industrious and prosperous in Central America. The republic is bounded on the north-west by Nicaragua, from which it is partly separated by the river San Juan, on the north-east by the Caribbean sea, on the south-east by Panama, and on the south and west by the Pacific ocean. The Pacific coast is indented by the two large gulfs of Nicoya and Dulce, in the former of which the pearl-fishing industry is carried on.

* "Industria."

The country, which is separated by a narrow strip of land from lake Nicaragua, is traversed from south-east to north-west by the Sierra Talamanca and its continuation, which near Cartago is indented by the depression known as Col d'Ochomopo, from which two streams flow in opposite directions to the Atlantic and Pacific oceans—mountains which attain elevations of 10,000 to 11,000 feet, with a number of volcanoes, active and dormant. Irazu, the volcano of Cartago, the loftiest, 11,200 feet, whose summit commands a view of both Atlantic and Pacific oceans, is freely active, and it has given rise to several seismic disturbances. Along the coast of the Pacific, especially round the bay of Nicoya, the country has a beautiful and picturesque appearance, being diversified by valleys and intersected by numerous streams. The gulf of Nicoya is a land-locked inlet containing an archipelago of richly wooded islands, and it takes its name from an Indian chief who, with his tribe, was converted to Christianity in the sixteenth century. Its pearls and mother-of-pearls and purple-yielding murex have made it famous.

The two ports of entry to the republic are Puntarenas on the gulf of Nicoya—the Pacific—and Port Limon on the Caribbean sea, the latter being connected by rail with San José and Alajeula, a distance of 117 miles, forming a transcontinental line.

Costa Rica was so named by the early Spanish settlers on account of its immense natural wealth, and it contains, in addition to its virgin forests, broad savannas and valuable vegetable and fruit products, mineral deposits of great value. Many gold mines were worked by the early Spaniards, and recently some activity has been shown in exploiting this branch of industry, warranted by the richness of the mineral deposits in the extensive mining zones of the republic. The native Indians worked, in a crude way, the silver, gold, and copper mines of the land in olden times.

In all parts of the republic, with the exception of the sea coast, the climate is mild and temperate, never subject to excessive heat or cold, and rarely experiencing any other

vicissitude than that from dry to rainy season. At San José, at an elevation of 3,700 feet, there is a perfect spring with a mean annual temperature of 68° ; the rainfall is in places very abundant, and more so on the Atlantic than on the Pacific side, ranging as high as 140 inches at Port Limon. The land, therefore, is well adapted to agricultural purposes, and capable of bringing to maturity many European plants, as well as those peculiar to the tropics. Heavy and luxuriant forest covers a large part of the country, extending far up the mountain slopes, and includes mahogany, ebony, indiarubber, Brazil wood, native cedar, oak, and myrtle. This growth of tropical forests has covered the land for ages, and in consequence the rock has been overlaid with a very thick vegetable mould, and the soil is, therefore, remarkably fertile, especially in the valleys between the mountains, where two harvests a year are commonly reaped. Sugar-cane, maize, beans, cocoa, rice, tobacco, rubber, spices are among the principal products ; with great quantities of hard woods and dye woods for export, on both coasts. Rubber export fell off, due to the over-exploitation of the trees, but new plantations have been made. The cocoa is of excellent quality and its cultivation is increasing. The excellent quality of the Costa Rica coffee is well known ; it commands a high price abroad, and more plantations are being established. Banana cultivation is exceedingly important, and heavy exports of the fruit are made, amounting to more than 10,000,000 bunches annually, taking a leading place in the country's foreign trade. The soil in certain districts is peculiarly suited to the banana, and large areas remain to be planted, such as are capable of furnishing continuous supplies of this valuable source of food. The great banana trade of Costa Rica has grown to being entirely since the year 1880.

The capital of Costa Rica, San José, with a population of about 27,000, stands in the central plateau, 3,870 feet above sea level. It is of modern appearance, with good streets electrically lighted, although the houses are of one storey in order to lessen danger from earthquakes. The

suburbs consist in the cane huts of the Indians. There are two large public parks ; and the cathedral, government offices, schools, museum, library, and barracks are among the principal buildings.

The valuable resources of Costa Rica, its comparative immunity from revolution, earlier attracted considerable capital from abroad, principally from Great Britain and the United States, which served for interior development ; but later, large arrears on the foreign debt came to being, followed by bankruptcy. The political stability of the country, however, is noteworthy, and is due in great part to the existence of a large class of peasant proprietors, including more than two-thirds of the population : a condition of comparatively rare occurrence in Latin America. Education is free and compulsory as regards primary instruction : complete religious liberty is guaranteed by the constitution, and military service is compulsory in time of war.

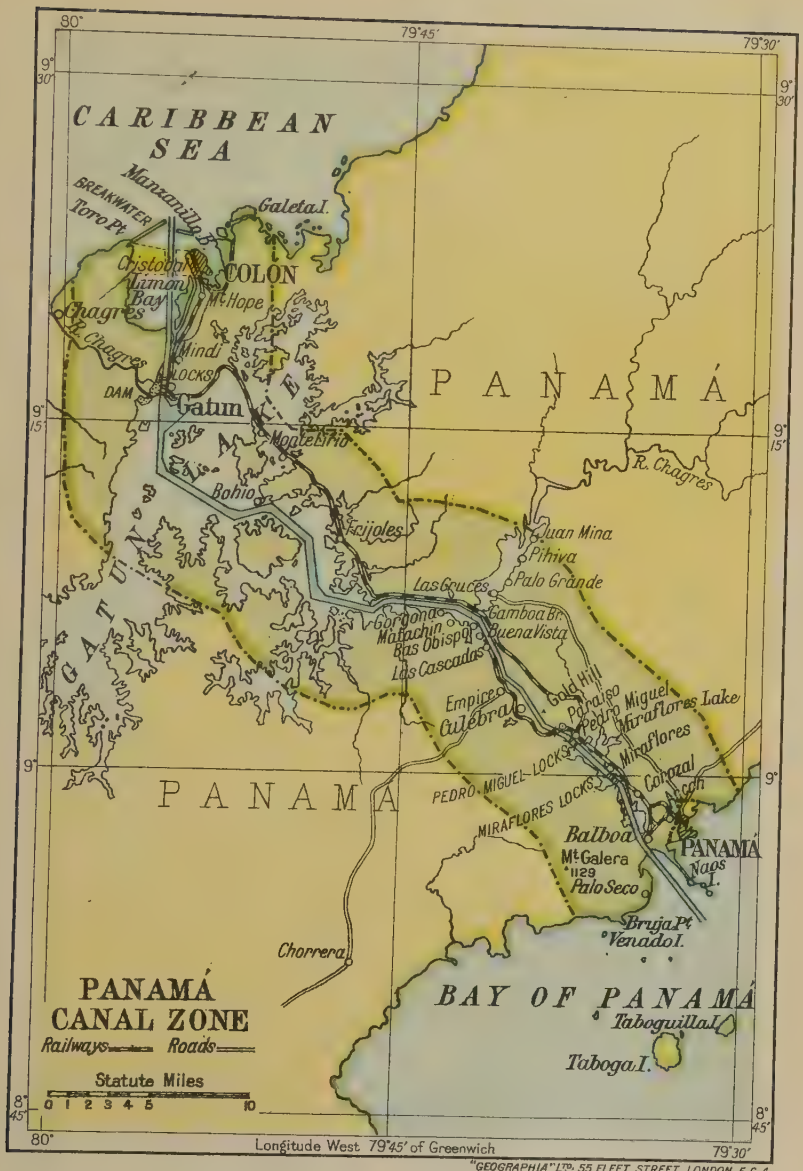
PANAMA

The small republic of Panama has built considerable hopes for its future upon the Panama canal ; dreaming that its at present small cities will be transformed into great emporia of wealth by reason of the traffic passing through its territory, and the presence of ships of all nations in transit upon its coasts. Whether these hopes will be realised only the future can shew, but practical consideration will give rise to doubt as to whether any very rapid change of fortune can take place. The considerable floating population which the building of the canal required must disperse as the work is completed, and the loss of the harvest of money which the pay of the workers brought must react upon local industries and trade. The city of Panama is not upon the direct route of the canal, and whilst predictions of a rapid growth of its population have been made it is reasonable to suppose that the town of Balboa, the Pacific terminus of the waterway, is more likely to expand. Considerable progress has been made in the nine years of independent life of the republic, since the separation from

Colombia, and it is doubtless in a slow, steady growth that the young republic will find its greatest advantage. The influence of the United States in recent presidential elections has been of much benefit ; the turbulent or corrupt elements of political partisanship having been shewn that the ballot must be respected.

The natural resources of Panama are considerable, but there is a tendency to exaggerate them. Those parts of the territory which are best known are capable of yielding useful tropical products, such as rubber, ivory, nuts, hardwood. Cocoanuts, sugar-cane, tobacco, and other products can be cultivated throughout large areas of country ; and cattle-breeding offers some possibilities. The cultivation of cocoanuts in Panama, as in most of the Central American republics, may be expected to increase considerably in the future, as is the case with rubber ; and new plantations are being made. An American company has recently laid out 32,000 acres of bananas and 1,000 of cacao, and elsewhere 150,000 rubber-trees have been planted, success being attained in the lands away from the hurricane belt. At present, however, nearly all the rubber exported is from wild trees. Of cocoanut palms 7,000 have been planted. For the year 1911 bananas to the value of £215,000 were exported ; cocoanuts £2,500 ; turtle-shell £2,500, also chocolate, live turtles, hides, sarsaparilla ; and in 1910 exports included : gold £27,000, hides £17,000, ivory nuts £26,000, mother-of-pearl shell £15,000, rubber £32,000 : which serve to shew the variety of products.

The Panama canal works embodied first, the formation of a sheltered basin in Limon bay on the Atlantic coast of the Isthmus, by means of a breakwater from the fortified Toro point, and the dredging of a channel, affording a depth of forty feet of water from the sea through the low, swampy ground as far as Gatun. At Gatun are the eastern locks, a double flight of three locks, and abutting on their walls to the west is the immense earthern dam which closes the lower valley of the Chagres river. Through the centre of the dam runs a concrete-lined spillway, and the waters of the artificial lake Gatun thus impounded extend far back,



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flooding the low-lying country behind and covering an area of 164 square miles—a lake whose surface is eighty-seven feet above the height of mean tide. The vessels rise through the three locks, eighty-seven feet, to float upon the surface of the lake, across which they proceed under their own steam for twenty-two miles, at a fair rate of speed, to Gamboa. From this point a great artificial canyon, the famous Culebra cut, one of the greatest cuttings of earthwork ever attempted in the history of engineering, encloses the canal for eight miles to Pedro Miguel, where a single-flight lock, in duplicate, lowers the vessel to the surface of another artificial lake, that of Miraflores, a mile and a half long. At the termination of this lake a double flight of twin locks again lowers the vessel to the level of the Pacific ocean, to a waterway formed for eight miles through low swamps to deep water in the Pacific, at the new port of Balboa—so named after the famous discoverer—situated slightly to the west of the city of Panama. Here the Naos islands dyke protects the terminus of the canal from silting currents, and connects the mainland with the fortified islands. The entire length of the canal from deep water in the Atlantic to deep water in the Pacific is fifty miles. The bottom of the Culebra cut is forty feet above mean tide, and the surface of the water, eighty-seven feet, giving a maximum depth of forty-seven feet of fresh water in the canal and a minimum of forty-one feet, according to the wet or dry season affecting the level of the lake. The available length of the locks is 1,000 feet; their width 110 feet.

The shortening of routes by the canal are, for Vancouver and other ports north of Panama on the west coast of America 8,400 miles to New York, 7,000 miles to Montreal, and 6,000 to Liverpool, Antwerp, and Hamburg. For ports on the west coast, south of Panama, the distance varies from 8,400 miles to zero, near the southern extremity of the continent, the average reduction being about 5,000 to New York and 2,600 to Liverpool. From Yokohama to New York the reduction is 3,700 miles, and from Shanghai 1,000. The distance from Hong Kong and Manila remains practically unreduced from the Suez route. From Sydney

to New York the reduction is 3,800, and 2,500 to Montreal, and from Melbourne to New York 2,600. Thus Yokohama, Sydney, and Melbourne via the canal, are nearer New York than Liverpool. For the first time the circumnavigation of the globe north of the equator will be possible. East of Australia runs an imaginary north and south line, on which all points are at an equal distance from New York via Suez or via Panama. The British West Indies will no longer be at the end of a cul-de-sac, but on a great highway of commerce, with Jamaica in a position of strategic importance, and Trinidad on a line of communication from the Pacific countries of America to Brazil and Argentina.

The canal is owned and operated by the government of the United States, and will be fortified and garrisoned thereby: and the foreign relations of the Panama republic are controlled by the same power. The history of the canal is a chequered one, and whether from the engineering and the financing, whether from the diplomatic point of view, has been sullied by doubtful methods in certain respects. The extravagances and corruption of the Lesseps' engineers and financiers, the machinations of the United States directed against Colombia in the establishment of the Panama republic, and the proposed violation of the Hay-Pauncefote treaty by the United States, in the matter of canal dues, are among the incidents of the history of the great work. On the other hand, the work of actual construction and the labours of medical science upon the canal zone have aroused general admiration, and have reflected great credit upon the American engineers and administrators. From one of the most terrible fever spots in the world, the death rate of the canal zone was reduced, in 1912, to eleven per thousand, among the part of the population immediately under American control.

The building of the canal by the United States arose largely out of necessity, in the naval economy of that country; due in a measure to the Spanish-American war; and was accentuated by the voyage of the *Oregon* from San Francisco, via the straits of Magellan, to join the

American fleet off Cuba—a voyage which was a noteworthy incident in naval annals. The American people suddenly became aware of the vital necessity for a waterway between their Atlantic and Pacific coasts. The New Panama Canal Company, the successors of the de Lesseps Company, unable to raise sufficient capital for the completion of their enterprise, were willing to sell out; and the American offer of £8,000,000 for the rights and property of the French was accepted. Negotiations were then entered into with the republic of Colombia for an extension of time for the work, and for territorial rights over the canal zone, and after long delay a treaty was signed by representatives of both countries, but was refused ratification by the senate of Colombia, who threw it out in October, 1903. Within three weeks, the municipal council of the city of Panama proclaimed the Independence of the Province as an independent republic. American warships gathered to prevent the landing of Colombian or other hostile forces; the United States recognised the new republic; and the Panama Canal convention was signed, all in that brief period. The proceedings gave rise to world-wide discussion. The Colombian senate were within their rights in refusing to ratify the treaty; but, on the other hand, Panama being very remote, by reason of lack of means of communication, from Bogotá, and the people of Panama wroth at what they regarded their loss by the throwing out of the treaty by their own national government, secession was easy.

As regards its financial side, the total cost of the canal was finally estimated at £75,000,000; the interest upon which, and the annual cost of operation constitute, it is estimated, a charge of £600,000 per annum. It has been stated, as an example, that the profits on the Suez canal are so considerable that the British government alone, by virtue of its shares, receives upwards of £1,000,000 per annum in dividends: and the fixing of the Panama rates will be a subject for judicious commercial calculation, if efficient competition is to be maintained.

As regards the construction of the canal, considerable difficulties due to rock-flow have occurred, shewing some geological instability of the district.

The twelve Latin-American countries which front upon the Pacific are likely to receive considerable stimulus from the canal, due to the greater facilities for trade with the Atlantic coast of the United States and Europe. From the northern frontier of Mexico, to the straits of Magellan, the 8,000 miles of coast contain a resourceful and valuable territory, which has been much isolated from the activities of which the Atlantic ocean is the theatre, due to the long journey round South America. At the present time the twelve countries upon the Latin-American Pacific coast, conduct a foreign trade of the annual value of £100,000,000, which is an increase of 100 per cent. in ten years. In foreshadowing the increase of this trade it must not be forgotten that vast portions of the 8,000 miles of coast are arid, in Mexico, Peru, and Chile, and cut off from the interior by the vast range of the Andes in South America, and that the natural slope and outlet for South American products is towards the Atlantic. The theme of enthusiastic writers, who hold that the commercial axis of the world will be shifted from the Atlantic to the Pacific, by reason of the Panama canal, may or may not be verified. This crowning piece of engineering work and human activity in Latin America will have its special function and value, but cannot bring about any profound changes in world politics or commerce. As earlier remarked, the tendency of the world is likely to be towards increased home production and consumption, and economic stability, rather than towards a vastly extended commerce and carrying trade, although doubtless this will increase to some degree.

The Central American republics, with small exception, have been notorious throughout their history for constant revolutionary outbreaks, and the easy repudiation of, or failure to pay their foreign debts. The land has been drenched with the blood of its unfortunate inhabitants. Never perhaps, in the history of Christianity have people of the same race and family so slaughtered each other in partisan strife as the people of these distressed states. Over and over again the inhabitants have been impoverished and debased, the land laid waste, the male population

sacrificed in civil war. The rulers who governed, misgoverned, or exploited Central America in Spanish times —often little more than rascals and murderers—were succeeded after Independence was gained by revolutionary generals and dictators, whose rivalries were the cause of the fratricidal struggles that have continued, in some cases, up to the present day. Revolutions, and war with the neighbouring states, have stunted the economic growth of these communities, and rendered futile the attempts of well-meaning administrators for social or political betterment. Enormous debts entered into by irresponsible and dishonest governments have mortgaged the future of the people, or have been followed by repudiation. The foreign debt of some of the republics is extremely heavy. No interest has been paid, and in some cases the countries are bankrupt. Yet on the other hand the Central American republics contain elements, both in their soil and their people, which under more stable political conditions might convert the Isthmian regions into important centres of population and production. The ultimate future of lands so favourably situated and naturally endowed cannot fail to be of importance. The lands are of rich and varied resources, and the population tends rapidly to increase; and with the advance of education and good government, this part of Latin America might be expected more fully to enjoy the valuable inheritance, which its geographical and climatic conditions afford.

CHAPTER XV

FOREIGN RELATIONS, COLONISATION, AND COMMERCE

From the European point of view the foremost economic possibilities of the Latin American countries are the capacity for receiving immigrants, and of trade expansion and remunerative investment of capital. As regards immigration, this is specially of interest to the Spaniard, Italian, and Portuguese peoples, who are immediately at home in Latin America. The various governments of those republics are generally fully alive to the desirability of peopling the unoccupied and at present desolate territories under their control, and schemes for securing their share of the overflowing population of Europe fill an important place in their national policies in many cases.

The movement of population from Europe before the war was a marked phenomenon. How the current of emigrating humanity will develop remains to be seen. Certain factors have arisen to prevent the outflow: the growth of the neo-Malthusian doctrine, or curtailment of the large family; the tendency towards a more equitable distribution of land and national resources and a more intensive science of domestic development are matters which, in the near future, may affect the emigration of the British and European people; which, whilst it possesses valuable elements, is not without some stigma of reproach to the homelands; and the economic effects of the war.

In France the shrinkage of the population has become a commonplace, and maternity is now subsidised by the state. In Germany the same element has recently been shewn to be at work, to the chagrin of those who built their strength

and civilisation on the force of numbers. In England official returns generally record the birth-rate at its lowest. As for the United States, it is well known that the growth of the population and its capacity for industrial output depends largely upon immigrant labour, rather than upon the vegetative increase of the American family. These conditions in all countries are traceable to the growth of luxury on the one hand, and to the too severe struggle for life on the other, and must in a measure be regarded as a castigation, suffered by all these nations for their failure to bring about a more equitable distribution of the fruits of the earth by which men live, which are under their control. Thus it is that the growth of population in the emigrating countries, unless some change occur, is likely to be less prolific, and a diminution of emigration would naturally follow. As regards the United States, wholesale prohibition of immigration has recently been entered upon.

The second cause, that of an awakening on the part of European nations to the better treatment of its workers, the breakdown of monopoly in land, and the raising of wages, which shew signs of being brought about, may tend towards keeping at home those classes who formerly emigrated. This national awakening is more apparent in Britain than elsewhere, and a slow but sure revolution is being wrought, on the part of labour and the non-property owning classes, which is likely, if directed, to advance British civilisation more than anything in the past. In Spain, Italy, and other European lands the growth of this new spirit is much slower. If from Britain hundreds of thousands of Englishmen and Scotsmen with their families have emigrated, the outward flow from the Latin countries has been equally marked. Spain and Italy especially have driven their people overseas by their iniquitous land system at home. The great bulk of emigrants, at least from Britain, are from the classes of land-working capacity, classes which the country can least spare; and it is probable that a freer access to the land will, in time, have the effect of retaining this valuable element. Canada and Australia, which are serving as an effective drain to this class, might be advised in their own

interests, even apart from "Imperial" interests, to study whereby they might profit by the surplus urban element of Britain.

If a permanent curtailment of European emigration by reason of these causes were brought about, the growth of the Spanish American countries would naturally be retarded, for the vegetative increase in population in these lands, with the exception of Central America, is generally very small; and it is not likely to increase much until a better spirit of humane organisation is spread abroad. The Latin American race is really a prolific one, and the neo-Malthusian habit does not as yet flourish under the regimen of Roman Catholicism; but the conditions of life of the working population and the Indians, in Latin America, are too miserable to ensure a lowering of the high rate of mortality among infants.

The obtaining of immigrant labour for existing industries and for land settlement, is one of the most important problems in South America at the present time, and keen competition between several of the principal states has resulted in inducements to immigrants. Both Argentina and Brazil maintain immigration services, with active agents in Europe. Emigrants arriving in Argentina are provided with lodging, food, and medical attendance free of charge for five days. Considerable facilities are afforded in the obtaining of employment; free fares are granted by rail or steamer into the interior. Agricultural colonies and town sites are systematically laid out by the government in the more distant provinces, and land and lots offered the immigrant on certain conditions, generally those concerning fencing and development. In the new town areas fifty square yards of land are granted, in the suburbs small farm-sites of thirty-seven acres, and farther out on the pampa holdings of 250 acres may be obtained. The payment of one dollar per acre, paper money, in six annual instalments, the building of a house, and the cultivation of one-fifth of the area within two years are the terms required for occupation of these lands. For the experienced rancher with capital, land suitable for cattle ranches up to 6,000 acres may be

purchased on the instalment plan. The Argentine government has at disposal more than 30,000 square leagues of land, for sale to the highest bidder, in lots of 6,000 acres, for cattle ranching. There are, however, other conditions in connection with land tenure in Argentina which are less favourable. Whilst it would appear that land is easily obtainable in some regions, it is the case also that the enormous estates and holdings along the lines of railway and near the seaports form an obstacle to the rapid peopling of the country. The result of this is shewn to some extent by the fact that nearly half the people who enter the country from Europe yearly, as labourers and harvesters, leave it again after earning their season's wages. They cannot easily obtain suitable small holdings, and until this species of land monopoly is modified, and other improvements made in the matter of land purchase and settlement, this element of population will largely be lost to Argentina.

Brazil of recent years has adopted a policy of colonisation possessing some attraction for the immigrant. Propaganda service abroad has been established, and both the federal and state governments have undertaken the formation of foreign colonies upon public lands. Similar settlements are instituted by railway and other companies who hold large territorial concessions, and thus the methods in force in the British dominions are, though in a much less favourable way, employed in South America. In Brazil the inducements offered shew the growing value set upon immigration. On each lot a house is built ready for immediate occupation by the immigrant, its cost being added to the cost of the land, generally payable by instalments. Colonies are planned on lines broad enough to include the relatives and friends of immigrants who might come out afterwards. On the holdings, tools and seeds may be provided either by the state or the federal government free to the colonist, and financial help to tide him over until he may have disposed of his first harvest. There are other conditions which are of an unusual character, such as that of endowing the marriage of a Brazilian and an immigrant with title to land free of initial payment. Free medical attendance for one year

to the immigrant is generally given. These various allurements to attract a share of the world's emigrating population on the part of the largest state of South America require, of course, individual investigation and safeguard, and it is often the case that much is apparently offered which in practice it is difficult to attain.

The other states of South America possess less favourable conditions for attracting foreign people to their territories, due partly to lack of means of communication and of government funds and initiative; partly to the less accessible condition of their dominions. In Chile a good sum annually is spent on the colonisation policy, and there are large tracts of land suitable for settlement. A free passage is provided for immigrants and their families from European ports, and free transport into the interior, with an allowance for maintenance from the time of arrival in the country until the colonists are settled upon their holdings. A free grant of ninety-four acres of good land is made to each head of a family, with forty-four additional acres for each son over ten years of age A government loan is obtainable during the first year of cultivation, and a certain amount of material for house-building is given free, as is also medical attendance for two years. The obligations attaching to these conditions are that the land shall be worked for a minimum period of six years and instalment payments made without interest. It cannot be said, however, that a large flow of immigration has been attracted, as shewn in the chapter devoted to the country; and caution must be exercised by the emigrant.

Peru and other countries of a like nature, whilst offering advantageous conditions in free land, have not the same inducements. In 1921 a number of British colonists went to Peru by government invitation, but returned disaffected, Peru repaying their passage money. Peru possesses great areas of valuable land upon the upper regions of the Amazon, both in the form of uncleared forests and in the natural grass plains—regions which could support a large population: but they are remote from means of communication, and but little known. Yet once the tide of emigration turns that way those plains and valleys will attain a rapid

rise in value. On the coast the lands are in the possession of private holders, and although often valuable, expensive irrigation systems are essential for agriculture.

Mexico formerly made an active campaign for new settlers, with inducements as regarded land tenure and other matters which possessed attractions in certain respects. Large regions are still uninhabited, and fertile land could be obtained by purchase or by free grant, according to the various provisions connected therewith. Organisation of colonies and the establishment of new town sites were aided by the government, passages being granted in some cases to colonists, with free transport to the interior, maintenance for a certain period, tools, seed, and other matters. But conditions since the late political turmoil differ widely.

It is to Italy and Spain that the Latin American republics have looked for their new colonists principally. Italy has not invested capital to any extent in those countries, but she has sent there a multitude of her "surplus" labour; and Italians outstrip all other European immigrants, including Spain, in this respect. A rough census taken in 1901 placed the total number of Italians in South America at about 1,750,000, which were distributed approximately as to 1,000,000 in Brazil and 618,000 in Argentina; whilst Uruguay, Chile, Peru, Venezuela, and Paraguay accounted for 100,000, 13,000, 12,000, 8,000, and 4,000 respectively. In 1907, 80,000 Italians went to Brazil, 21,000 to Argentine, and about half returned. In 1911 Italian statistics gave a total of 2,500,000 Italians in South America, of whom 1,500,000 were in Brazil. The number of immigrants varies greatly year by year. It tended to decrease in Brazil, and to increase in Argentina, where, of the total population, 15 per cent. are Italians. But due to the Italian government's restrictions they decreased in 1912 in Argentina and increased in Brazil, which received 230,000 immigrants in that year, including a large number of Portuguese. Next to, or equal in importance with British capital, the Italian labour has been the main factor in the development of Argentina. It was the building of the Argentine network of railways that formed the first incentive to their immigration to the

River Plate; and wheat-growing followed. Artisans and labourers of all kinds went in later, and numbers of small retail traders, such as are found shopkeeping all over Latin America, from the Atlantic to the Pacific. The Italians in Latin America have been termed—not always in a complimentary sense—the "Chinese" of Europe, in that they make their wealth out of the country instead of taking it in, and follow small commercial pursuits under conditions of keen competition. But their labour has been of equivalent value, perhaps, with the capital of other nations. This class has, with its keen trading instinct, contributed considerably to the growth of the smaller towns, especially in Argentina. Even in the remote towns of the Andes small Italian merchants are found.

The Italians in Argentina have settled principally in Buenos Ayres, the province of La Plata, and the province of Santa Fé. One-tenth of the population of Buenos Ayres is Italian: the capital having 1,250,000 people; and they are mainly engaged in small trades. Among the Italians, in 1907, there were already 35,000 owners of landed property and houses, valued at more than £11,500,000. Most of the labourers are engaged in wheat-growing or in working for wheat-growers, and many return to Italy after the harvest. In the whole of North and South America, according to Italian statistics, there were, in 1911, 4,250,000 Italians, 58 per cent. of which returned home. Market gardening finds employment for many Italians. The province of Santa Fé was the foremost in attracting the Italian colonist, where they number perhaps 250,000; and Rosario, the capital, has one-fifth of its population formed of Italians, who are engaged in every kind of trade. In the town and province of Cordova they are almost as numerous proportionally as in Rosario. The Italian colonists are generally marked by their thrift, and their spirit of benevolence towards their own countrymen: an Italian generally helps an Italian. This is also a Chinese trait in America. In the province of La Plata there are more than 120 Italian "Societies for Mutual Benevolence." The figures concerning Italian colonists do not take into account the children

born in the country, who are regarded as Argentine citizens The Italians do not lose their nationality in one generation ; the land of their birth is generally regarded with reverence from afar, but despite the efforts of the schools and societies which they maintain for the preservation of their own language and methods in their adopted country, the children of the Italians become Argentinos, and their parents insensibly follow. This considerable immigration of its citizens is a serious loss to Italy, but a country whose social system, and conditions with regard to land tenure are such as drive its sons and daughters abroad, has only itself to blame, and the condition is likely to continue until an awakening comes. One item of consolation there is for Italy, in the very considerable trade carried on between Italy and Argentina : the republic being the best market for many special products demanded by the oversea Italians. Furthermore, the emigrants send back considerable sums of money to their relatives, the Italian Emigration Department giving as an estimate the sum of £3,500,000 sterling as annually sent home from America, generally by Italians. The suspension of Italian emigration to Argentina, which had earlier been enacted by the government of Rome, due to the poor condition of the immigrants in that part of South America, was removed in August, 1912.

As shewn elsewhere here, the number of immigrants over emigrants for the year 1920 was only about 40,000, a relatively small number.

Colonising and immigration in Argentina are far from being an unqualified success, whether from the point of view of the immigrant or the nation. There are several causes immediately responsible for this condition, one of which is economically false, and another socially wrong. The first is the difficulty the colonist experiences in obtaining a desirable homestead, or small holdings, and the high cost of living in the towns: suitable land with a proper title is difficult to obtain. The second is the lack of local justice, and the existence of persecution away from the great cities, of which frequent complaints are made, and protection

by the police is even more difficult of attainment. Provincial and municipal authorities are often corrupt and extortionate. Heavy taxation and the mal-administration of justice are conditions against which the poor colonist cannot contend, and both combine to render life difficult in the interior of Argentina. These matters reach the outside world from time to time, as an indication of a reprehensible state of affairs within.* As regards justice, it is not that the laws are bad, for in theory they are almost perfect, but that they are badly interpreted and enforced. The provisions of the great "Code Napoleon" are useless if the spirit of everyday justice is violated; and the well-informed colonist will naturally hesitate in venturing to a country where, in the great open spaces in which his life is to be lived, prompt and cheap justice is not obtainable, especially among a heterogeneous population, drawn in the main from races who hold human life cheaper than human property. In Argentina theft is more severely dealt with than homicide. It is in the growth of public opinion that these abuses must find their remedy, and it is but fair to say that some improvement has been observed of recent years, and that the Argentine government assiduously endeavours to attract immigrants.

The ordinary emigrant from the British Isles has generally been made aware that, under present conditions, Latin America is rarely a suitable field for him. The Spaniard, Portuguese, and Italian work side by side, but in manual labour the British cannot do this, unless it be under their own flag. Moreover, the men of the Latin race, when they make their living in petty trades and occupations of an urban character, as small merchants, shopkeepers and the like, are far more astute than the men of Anglo-Saxon race. Italians, Spaniards, and even Austrians and other people from central Europe succeed in small trades, often by means of high prices, short weights, and other petty extortionate methods which are more or less foreign to the Anglo-Saxon character.

The educated man without capital, cannot be advised to emigrate to South America or Mexico unless he goes to a

* *The Times* South American Supplement, 1912.

salaried position; and this can scarcely be termed emigration. His position would be an anomalous one. The work in offices, shops, and stores, which at home he might perform, is done in the southern republics by the middle-class native, and generally rates of pay are low. There are no conditions for the middle-class emigrant such as exist in Canada, where even menial work can be performed without loss of caste. The young man of Anglo-Saxon race without capital is cut off from Spanish America under present conditions, and will naturally seek the British colonies. He cannot work among half-breeds. The Englishman of the labouring class not unjustifiably considers himself better than any of his class among the Latin race, and the same holds good with the North American working man.

Despite these considerations, both from the national and international point of view, a vigorous immigration of people of the Anglo-Saxon and Teutonic races into Latin America would be beneficial, if suitable conditions were secured. However large it might be, the domination of the Latin race would scarcely be jeopardised, and the admixture, where it has occurred, produces a vigorous and intelligent strain. It is natural for Great Britain to seek to direct her emigratory people to her own colonies; but, both as regards international friendships and the maintenance of trade with Latin America, it is useful that British blood should be disseminated outside the empire. In the stagnant communities of the Andean republics, British, German, or North American settlements would act as centres of education and example. The future of the world lies not in the political expansion of nations at the expense of each other, but in the dissemination of new ideas, free intercourse with each other, and mutual assistance and regard. Conditions for successful colonisation by British immigrants might be secured under some method of co-operative settlement where they would form communities apart. Argentina possesses certain advantages for Englishmen. The climate is less rigorous than that of Canada, and it is much nearer Great Britain than Australia. The colonisation of the Falkland isles is at present the only example of a British

settlement in southern South America, with the exception of the Welsh community in Patagonia.

The influx and efflux of immigrants in South America gives rise to an interesting condition. Of the number of immigrants into Argentina the majority become emigrants again. In a sense they perform a double service. A great body of Italians and Spaniards goes over for the Argentine harvest, which occupies them from November to February, and, that concluded, they enter Brazil to assist in gathering the coffee crop, remaining in that country until August. The comparatively high wages obtained and the savings made, in conjunction with the low price of steamer fare, formerly permitted these human birds of passage to return to their native lands of Spain and Italy, and remain at home for three or four months. There is a natural development of travel and work in these conditions which contains certain possibilities such as might be given consideration in the colonisation by Great Britain of her dominions, especially as regards Canada. That the labourer of one hemisphere can afford to cross to another to work there, and return for a season to his own land is a novel condition which might find some useful application. This migratory movement, however, is largely due to the difficulty of the small-holder in obtaining land in Argentina and Brazil, as already described.

The better development of the more backward Latin American countries, it is possible, might be aided by the settlement therein of intelligent classes from Europe and the United States, who, finding the conditions of life too difficult in their native countries, should adopt the southern republics of the Spanish-speaking world as their home, under certain special conditions and privileges afforded by the governments of such countries. Such people would not be mere illiterate immigrants, such as pour into the country at present, furnishing little more than their labours, but educated people, who would be content to make their living in the country and confer benefits upon the people around them in social example, under certain privileges. There are possibilities for such a class. The climate is in many regions

excellent, and the native working classes are plastic and easily influenced for good: and greatly to be moulded by the superior intelligence of the educated European. Land endowed with natural resources is to be obtained at a very small expenditure of capital in certain regions. Such colonists would have to be self-dependent: to understand that riches are not to be gained necessarily by producing for export. They would live their life regarded as distinguished members of the community, taking part in its direction. Whatever small capital they had brought in would yield far greater returns than in Europe. The number of persons in Great Britain of superior education, but without means of expansion for their energies, is considerable and growing, and such an outlet might offer attractions. The government of many of the Latin American republics might do well to avail themselves of the services of this element. Throughout Peru, Bolivia, Argentina, and other countries there are thousands of petty officials, known as "gobernadores," generally mestizos of little education, steeped in the methods of petty oppression of the poorer classes, and more or less venal. These posts generally are unsalaried, but carry certain perquisites. If an educated class of Englishmen or others could be brought in with their families to settle there, acting as magistrates and so forth, after the system in British India, a useful purpose might be served. Europe has much administrative talent going to waste, which Latin America lacks, and the character of the British man of education and his administrative ability would be of incalculable value to Latin American communities, in the civilisation and advancement of the remote interior regions. Possibly, however, that is outside the range of practicability, at present.

The political and commercial relations of the Latin American republics with foreign countries are in an interesting condition of flux and development. The possibilities they offer for trade, for immigration, and even for territorial aggression, are subjects of constant discussion and rivalry.

The two nations generally accredited with ideas of

territorial aggression or acquisition in Latin America were the United States and Germany. Before the war the Latin American republics were subject to growing suspicions of their powerful Anglo-American neighbour, the United States, which the latter has striven diligently to allay. Inroads upon the integrity of their territories have been feared, or profession of fear made, and doubt expressed of the sincerity of the Americans in dealing with the political condition of their weaker neighbours.

That the Americans could ever gain permanent advantage by encroaching upon Mexico, or other Latin American country, or that they have any idea of territorial acquisition at the expense of the Southern republics, is greatly to be doubted. The tendency of the world is not towards hegemony on the part of large nations, but rather to "home rule," or the increasing independence of small states. The futility of attempted domination of one race by another, except under very exceptional circumstances, or temporarily, is evident to the disinterested student of world-politics.* The United States would enjoy little in Mexico were they able to conquer it by force of arms, and were it placed arbitrarily under the Stars and Stripes. A condition of race-hatred such as has rarely been seen in the history of the world would be set up. Economically nothing would be gained. The American labourer will never work side by side with the Mexican; the country as a market is already captured or could be captured by the United States, as far as such is possible in the present world-competition of nations. The raw material and food products of Mexico are required by the people of the country, and could never form any considerable adjunct to the American table or factory: and if they are required they are as easily obtained under existing conditions. No sane American administration could pretend permanent occupation of Mexico; the time for such conquest is past, or never existed in this case. The parallel of England and the South African republic might be cited, but this was a different

* The author brought forward this point in his book, "An Imperial Commonwealth." London, 1909.

case. Many recent struggles and conflicts shew how useless and criminal it is to endeavour to extinguish a nationality. In the case of South Africa it was not unnatural to set up the self-government of two races, both of which were so largely represented, and which now owes only sentimental allegiance to Britain. American settlements and financial holdings in Mexico are too inconsiderable to warrant any participation in the government of the country by America. The United States nation as a whole are averse from trespassing upon the rights of other nations: and they have neither the desire nor the talent to undertake the administration of people of different race and language. Their behaviour in Cuba has been exemplary and rational. The doubtful morality attending the acquisition of sovereignty over the Panama Canal zone obeyed commercial and defensive motives, rather than purposes of political aggrandisement. Intervention in the domestic affairs of Central American republics, if it be brought about, will be by reason of following out the self-assumed but natural and useful rôle of policeman in the new world: and the desire to enjoy a preponderance of trade therewith. Despite these considerations, the attitude of the United States towards Latin America has at times given rise to a feeling of resentment and perplexity on the part of their sensitive southern neighbours; but American diplomacy is studying more closely the character of the Latin American peoples, with increasing understanding and mutual regard as the result. But what the future may hold in the sphere of American political action it would be impossible to predict.

The German nation has been credited from time to time with the desire to possess itself of territory in South America, which it might control politically as well as commercially. That the desire has existed and still exists there is little doubt; but that the intention is to be brought forward is a matter which will depend upon international conditions, whose trend at present is not apparent. The subject may be regarded from more than one point of view. Germany has come too late into the sphere of a leading nation to obtain a share in the unoccupied spaces of the world, in

which she might have founded colonies. At a time when Englishmen of sinew and adventurous spirit were marking out spheres of possession, the petty royalties of Germany were keeping their numerous courts, and that phase of world-development of which Spain and Britain were the masters has passed. After that arose the question, What is a Colony? Spain decided it in one way, Britain in another; but Germany to-day may still strive to ask the same question and endeavour to decide it in her way. A colony is one of two things. Either it is a possession which yields absolute and exclusive advantage to its parent land, or it is an independent unit joined by ties of sentiment and a common flag, but giving no special advantage to its parent source. In the last category are the self-governing dominions of the British Empire. In Canada, Australia, or any other of the five autonomous English-speaking states, the Englishman has practically no privilege over any other nation, whose emigrants or traders are equally open to acquire homesteads or markets. The British ratepayer has ungrudgingly borne the cost of naval armaments, which have protected the colonies in their growth; but his reward is much less a material than an altruistic one, and must always be so. The conquest of commerce and trade is attained now, not only by enterprise, but doubtful methods, and if the nations can oust each other from the markets of the world, they will do so, and future conflict may be expected. But despite these premises, Germany or any other colonising nation might contend that the vast uninhabited region of South America would be an advantageous field for political occupations: and set itself towards a policy of conquest. There is little doubt that the partition of various territories of Latin America by certain European powers would have taken place were it not for the restraining influence of the United States; of its public opinion and naval armaments, whose general concrete expression is that of the Monroe Doctrine. Had it not been for these elements the German flag would possibly have floated over portions of South America. That such should so

occur, however, cannot be held to be possible now, though some sudden change in world-politics might require a more rapid colonization of empty lands. The subject of such occupation of land by oversea powers bears discussion from the point of view of expediency, although the outrage of the sovereignty of Latin America by foreign occupation of any portion of their territory could not morally be condoned. It can scarcely be doubted that if an offshoot of Germany had existed in South America, the development and peopling of the continent would have been greatly augmented. Such a colony or possession would not be likely to have remained permanently under the German flag, supposing it were established, for the German colonist is undoubtedly happier under a foreign flag. On the whole, conditions were better, in view of the war, without a German element. But the enormous tracts of land in the heart of South America, often inhabited at present by little more than savages and monkeys, were they subject to an inrush of civilising European people and capital, would certainly gain thereby. The history of colonies everywhere shews that it is physically impossible to make of them permanent fields of spoliation or oppression, or even to subject them always to political control; and when such European settlements grew up they would inevitably form part of the Latin American people, whose status and sovereignty is too strongly fixed to be more than momentarily interrupted. A large infusion of European blood, especially of Teutonic or Anglo-Saxon, would be of great benefit to the stagnant continent, and from that point of view it seems a matter for regret that the German nation had not been permitted to expend a portion of its strength and fecundity upon South America before its moral character was ruined by the war and before that fecundity were lessened, as the lowering birth-rate shews is likely to occur.

So far the penetration of South America by Germany under the method of industrial colonisation and by trade and commerce has been noteworthy. The earliest German attempts at settlement found little success, due in the main

to want of proper organisation and encouragement from home. This was not the case afterwards. Powerful organisations and national encouragement have been responsible for important German centres in Brazil in this century: and were it not that the national flag is Brazilian, these centres might almost be taken for parts of the German "Empire." In Santa Catherina and adjacent places German settlements, embodying 4,000 square miles of land, have been established, with 20 per cent. of the population of German origin and the German language spoken everywhere. In the province of Rio Grande do Sul it is estimated that there are 250,000 Germans, equal to a quarter of the population. The Germans endeavour to keep alive their national traditions and spirit in these colonies by every means possible, including the establishing of social centres, clubs, schools and other characteristic German institutions: whilst the local administration is controlled by Germans. This Teutonic invasion might have become a source of anxiety to South and North American statesmen, as opening a way to political acquisition of territory by Germany, whenever German interests might feel themselves sufficiently established to proclaim such a policy. But any such fears were exaggerated. The German-speaking people in Brazil are not German subjects. They did not wish to be part of a German Empire, as shewn by the fact that they lost little time in naturalising themselves as Brazilian citizens. The second generation forgets the Fatherland, and begins to speak the language of the country. Whilst these Pan-Germans—if such they be—are a loss to the military forces of Germany, they form on the other hand a favourable centre of consumption for German goods, and at least for that reason are regarded favourably by the Fatherland.

All these considerations have, however, been greatly modified by the war. As an empire Germany does not—at present—exist, and whether or not the formerly aggressive overseas or colonising spirit will grow again only the future can shew. The work of the League of Nations and of the Washington Conference (1921–22) and other matters has also modified world-conditions in these respects.

The United States would undoubtedly go to war in the defence of the doctrine, but war for them in South America would be mainly a naval battle, and the result would depend upon the stronger fleet. The Monroe Doctrine forbids political transfer of territory in the American hemisphere between non-American people, but such an exemption or prohibition of transfer not only has no precedent in law, but is without treaty support from any other nation, and it rests solely upon the will of the United States citizens, and can only be supported in an extreme case by sea power. If the struggle for South American territory should come, whether from Europe, whether from Asia—Japan, for example—its results will depend upon naval armaments.

There is some successful German colonisation in Guatemala and in Chile, and German banking is closely allied with these matters. The advance of German methods and influence in Chile was formerly marked, and gave rise to the term "Germanisation of Chile." The Germans are much more active in bringing forward their trade and colonising influence than the British. In 1909 the German schools in Chile were attended by nearly 3,000 pupils, and the " thorough " methods of the Germans are evident in their mixing with Chilean society. The Germans in South America invariably speak Spanish, and the trade lists and catalogues of German commercial travellers and manufacturers are provided in the same language. In Argentina Germans have settled to a considerable extent, and it is towards this republic that the main stream of German emigration was setting before the war. Large areas of land have been obtained by colonisation societies for the settling upon them of families taken directly from the Fatherland. The Germans were regarded as desirable settlers in Latin America by the republics generally, and doubtless immigration will grow. The importance, politically, of German immigration as a possible menace has been exaggerated. The activity of Germany in South America is mainly due to the possibilities of commercial and financial gain which those growing communities offer. Probably

the conquests of territory have ceased, or have ceased at present in the New World, and the conquest of market and dividend is that which exercises the rivalry of foreign nations in South and Central America and Mexico. It would, however, be rash to forecast the future.

The most active nation in the commercial conquest of Latin America so far, has been Great Britain. The development of the principal Latin American republics was begun with British gold. It built the railways, opened the mines, and financed the plantations and the banks to an extent greater than that of all other investing nations combined. This great investment of capital, although at times it was hazardous and adventurous, brought as a result the preponderance of trade with England, which has been the outstanding feature of Latin American commerce, and which although in diminishing proportion is still maintained. The geographical distribution of capital, which tends to preserve a balance in British commerce and income, has an important seat in Latin America. Scarcely a single industry is unrepresented by British capital. Scores of offices and Boards of Directors in London attest the part played by the British merchant and shareholder in those regions. There is no more striking instance of the power of money, than that the inhabitants of the small island of Britain should have been the means of bringing about the development, in considerable part, of the extensive communities of Latin America. Exact calculations of the amount of British capital invested in these countries it is impossible to make, but the amounts represented by shares quoted on the London Stock Exchange may be taken to represent the minimum. These at the close of the period before the war were as follows: *

	Government Securities.	Railways.	Miscellns.	Total.
	£	£	£	£
Argentina	78,967,966	201,734,494	49,188,340	329,890,800
Brazil	106,025,690	51,223,679	53,850,426	211,099,795
Chili	33,650,880	18,743,320	8,730,713	61,124,913
Uruguay	25,714,421	15,380,073	4,739,892	45,834,386

* Compiled by the *South American Journal*.

	Government Securities.	Railways.	Miscellns.	Total.
	£	£	£	£
Peru	1,772,440	462,933	23,542,810	25,778,183
Bolivia	293,740	—	—	293,740
Venezuela	4,361,420	2,745,976	975,289	8,082,685
Colombia	2,486,600	4,299,200	—	6,785,800
Ecuador	200,808	2,644,440	—	2,845,248
Paraguay	773,750	2,242,930	—	3,016,680
Mexico	27,413,630	101,436,789	28,078,140	156,928,559
Guatemala	1,445,220	—	—	1,445,220
Salvador	851,900	1,435,300	—	2,287,200
Honduras	3,143,200	—	—	3,143,200
Nicaragua	1,071,240	—	—	1,071,240
Costa Rica	2,010,770	3,370,600	200,000	5,581,370
Panama	—	—	—	—
Cuba	9,892,000	25,533,998	6,633,920	42,059,918
Shipping	—	—	—	11,658,530
Banks	—	—	—	18,212,983
	300,075,675	431,253,732	175,939,530	937,140,450

The most successful British interests in South America are generally considered to be the banks. These have yielded, as a rule, steadily improving dividends, and have added largely to their reserve and other funds. The eight principal banking concerns in this field, whose shares are quoted on the London Stock Exchange,—five being companies registered in England and directed from London —have a total subscribed capital of £21,288,048, of which about £16,000,000 is paid up. The dividends paid by these banks during many years have amounted to sums equal to an average of nearly 15 per cent. on the paid-up capital. One leading bank is the London and River Plate Bank, which at the close of 1912 celebrated its fiftieth anniversary, having been established in 1862, and for many years the company has paid a dividend of 20 per cent. to its shareholders. The authorised capital of this bank has recently been increased to £4,000,000, of which £3,000,000 has been issued, and £1,800,000 will eventually be paid up. The present holders, whose shares are now worth £60, have only been called upon to pay £10 therefor. The National Bank of Mexico, with a capital subscribed and paid up of £3,178,000, also paid 20 per cent. dividend. The London and Brazilian Bank, with a subscribed capital

of £2,000,000 and a paid-up capital of £1,000,000, paid 17 per cent.; the British Bank of South America, with subscribed and paid-up capitals respectively of £1,500,000 and £750,000, paid 15 per cent.; the Bank of Peru and Mexico, £500,000 capital subscribed and paid-up, 14 per cent.; the Banco Español del Rio de La Plata, with an office in London, 12 per cent.; the London Bank of Mexico, 12 per cent.* The important, active Anglo-South American bank has capital and reserves of £12,500,000.

The foregoing particulars shew that whether from the point of view of security, or dividends, the South American banks may be regarded as satisfactory, comparing favourably with British or other banking concerns. The field of investment was for a long time mainly British, but at present it is disputed by state-owned banks, in the various republics, and by various successful and enterprising German banking institutions, especially prominent among which is the Deutsche Bank. North American interests have been practically unrepresented, but there are indications that American groups are to enter the field.

It is not possible to calculate with any exactitude the return upon other capital investments, but as regards the railways, the total mileage at the close of 1912, in the countries named below, was 20,975 miles, engaging £278,889,905 of capital, which produced as net revenue £13,250,302, or an average return of 4·7 per cent. in the last completed year of working. This included practically all the British-owned railways in the republics mentioned, and comprised twenty-nine separate companies, with a certain number of subsidiary lines, such as the Argentine Trans-andine and Bahia Blanca, whose figures are included in those relating to the Buenos Ayres and Pacific line. The following shows the mileage, capital, and net revenue for the last completed years, of this group :—

	Mileage.	Capital.	Net Revenue.	%
		£	£	
Argentina	13,676	198,902,829	8,339,273	4·2
Brazil	2,788	22,915,699	1,438,907	6·2
Chili	1,430	14,499,057	1,331,017	9·1

* The foregoing figures refer to the pre-war period.

	Mileage.	Capital. £	Net Revenue. £	%
Uruguay	1,224	12,875,453	708,431	5·5
Cuba	1,690	26,950,867	1,323,827	4·9
Venezuela	167	2,746,000	108,847	3·9
Total	20,975	278,889,905	13,250,302	4·7

With the numerous mines, plantations, factories and industries, with their considerable returns in many cases, it is seen that a great, steady stream of gold flows from Latin America to Great Britain, even if a good deal of the capital quoted on the London Stock Exchange is held by continental investors. A strong American element is at work at the present time in acquiring railway interests in the River Plate republics, and if successful the conservative and passive British control may be exchanged for the American "trust methods," in which condition some South American and British journalists see an undesirable element.

In matters of trade, Latin America is one of the most important customers of Great Britain. The republics purchased manufactured articles from Great Britain to the annual value (pre-war period) of £56,000,000, equal to somewhat less than 20 per cent. of the total export trade of Britain: and exported to Britain commodities to the value of more than £55,000,000, which must be regarded as excellent exchange. About two-thirds of this considerable commerce was performed with Argentina, Brazil and Chile. Figures are not exact, and are difficult to obtain and often shew discrepancies, but between various sources for the pre-war years the estimated total foreign trade of the Latin American countries was £472,000,000, of which, as stated, Great Britain accounted for £111,000,000. The following table shews these figures in detail.

	IMPORTS.		EXPORTS.	
	Total	From Great Britain	Total	To Great Britain
	£	£	£	£
Argentina	70,354,131	21,875,478	74,525,215	16,158,697
Brazil	47,114,967	14,412,213	62,001,287	14,688,114
Chili	22,311,427	7,056,282	23,791,009	9,531,546
Uruguay	8,230,000	2,425,136	8,305,261	709,349
Peru	4,631,280	1,567,897	6,408,282	2,672,540

	IMPORTS.		EXPORTS.	
	Total	From Great Britain	Total	To Great Britain
	£	£	£	£
Bolivia	3,675,371	1,500,000	5,997,031	3,611,081
Venezuela	2,243,215	603,660	3,422,557	383,425
Colombia	3,405,127	1,000,000	3,525,030	610,172
Ecuador	1,604,821	496,789	2,733,274	228,174
Paraguay	1,074,967	248,906	883,899	410
Mexico	21,012,402	2,447,957	29,987,198	3,662,989
Guatemala	1,050,263	227,084	2,015,843	201,252
Salvador	749,049	233,198	1,459,567	96,761
Honduras	603,883	84,815	642,979	12,520
Nicaragua	516,651	125,133	797,885	168,690
Costa Rica	1,630,500	263,694	1,728,900	610,613
Panama	2,011,398	433,396	353,866	33,054
Cuba	20,735,116	2,458,443	30,181,804	2,139,257
Total	£212,954,568	£56,460,081	£258,760,887	£55,518,644

The important lead acquired in commerce with Latin America by Britain has long been held, but is not being maintained. The amount, in relation to that of the United States and Germany, is decreasing ; and French and Italian trade is also increasing with the Latin American republics, largely at the expense of England. The decline of British trade proportionally in Latin America, has been so continually brought forward that it has become a commonplace. Various reasons are adduced. The custom of sending out goods by manufacturers, which conform to their own standard, instead of adapting the standard to the requirements of purchasers and consumers in the countries for which they are intended, is among the foremost. The obstinate use of British instead of metric measures is another cause of complaint. The Latin American countries have generally adopted and use metric measures, in great part. A similar contention is advanced with regard to British currency, in which price lists are generally given, instead of in the decimal coinage of dollars and cents which, in one form or another, has been adopted throughout the three Americas. Catalogues, it is complained, are generally written in English, where the language of the countries to which they are sent is Spanish or Portuguese, and consequently they are often thrown aside as incomprehensible.

The linguistic failing is perhaps that most frequently adduced. British commercial travellers, it is averred, do not frequently speak Spanish or Portuguese, and the representations of German houses, who are often linguists, are enabled to secured business with greater facility. The commercial travellers who tour South America in the employ of British firms were often Germans, simultaneously holding commission from firms of their own nationality. In financial matters it is maintained that British banking facilities in Latin America are too conservative and inelastic. Their methods are honest, but not sufficiently enterprising. The growth of German banks in some Latin American countries, and the success they apparently attained, might seem to bear out in part this contention. A further defect is that of insufficient representation on the spot. British traders are said to be too timid or economical in the establishing of agencies and warehouses, where goods and prices may be seen by intending purchasers. The Englishman is also accused of being too exclusive in his business methods, too much addicted to sport and the enjoyment of the week-end, and fails to mix socially with the people of the country. The German, French or Italian trade representatives are, on the other hand, described as devoting themselves constantly to the work, of living frugally and associating themselves with local society; marrying among the native families, speaking their language, and generally creating an affinity of social and commercial value. But whatever may be the real conditions, the fact is understood that British trade and finance do not increase in their former proportion. Doubtless the decrease is in part inevitable. Business methods are increasingly strenuous, and results are naturally shared more generally among the competitors than formerly. Trade rivalry must continue to grow, until that point is reached when nations become to a greater extent self-providing. Economic conditions after the war greatly affected British production, especially in 1920–22; conditions which, however, affect all nations.

The trade of the United States with the Latin American republics is now greater than that of any other nation.

The preponderance is, however, with the ten northern republics, of Mexico, Central America, Cuba, etc., as contrasted with the group of the ten South American republics. A great part, moreover, of this export trade of the United States is in raw or partly manufactured articles, which is less remunerative than that of the finished articles of the European exporting nations. The approximate values for 1911 were: Exports from the ten northern republics to the United States £48,000,000; United Kingdom £6,750,000; Germany £5,000,000; France £3,500,000. Imports from the United States £27,750,000; United Kingdom £6,700,000; Germany £5,300,000; France £3,250,000. The exports from the ten South American republics were: To the United States £39,000,000; United Kingdom £45,300,000; Germany £28,000,000; France £19,500,000. Imports from the United States £26,000,000; United Kingdom £54,500,000; Germany £33,000,000; France £15,000,000.

The interest of the United States cotton manufacturers in Latin America is likely to increase in the future, as a market for the disposal of their wares, for the home markets are no longer sufficient for their output. The annual value of cotton goods imported into the Latin American markets, was more than £20,000,000 sterling, and of this the United Kingdom supplied more than 50 per cent., and the United States only 8 per cent. The American exporter may expect to reap some advantage from the Panama canal in this connection, in the matter of carriage; but this will affect only the Western Coast, Colombia, Ecuador, Peru and Chile, and not the great countries of the eastern side of South America, such as Brazil and Argentina. The Americans have already long enjoyed an advantage in freight rates to Latin American ports, the cost per cubic foot for cotton goods from New York to Buenos Ayres being more than twice the cost from Liverpool. The main factor is in the cheaper cost of production in England; but the future determining factor, as shewn elsewhere, will doubtless be the growth of home manufacture in Latin American countries themselves.

The United States are becoming fully cognisant of the

markets offered by their southern neighbours, and their diplomacy in the future may partially be bound up with the commercial aspect. The Americans find, in bidding for the southern trade, that their rivals of Britain, France, and Germany are firmly established, with relations begun in times when the United States was engaged in supplying their home markets and building up their domestic trade. The enormous amount of British money invested in the field provides a considerable safeguard for British trade, and the powerful banking and shipping interests of Britain, engaged in connection therewith, are vastly superior to any forces of a like nature possessed by the North Americans. But it cannot be doubted that there is ample room for superior organisation, and the trade will fall largely to that nation which employs such. The Americans are clever specialists, and to commercial enterprise may be added the "dollar diplomacy," as the foreign policy of the United States in connection with Latin America has rightfully or wrongfully been dubbed. The implied corollary of the Monroe Doctrine, from which it seems difficult for the United States to escape, is that of responsibility attaching to the conduct of international affairs, and even of domestic matters, of the small Central American republics, and possibly of Mexico—territories lying north of the Panama canal and the massive mainland of South America. But with a sensitive people such as the Latin Americans, any assertion of authority or hegemony by the United States is immediately resented, and if exercised would be inimical to trade relations. The problem for the United States is not an easy one, involving as it does on the one hand the necessity for some moral intervention or mentorship, and on the other the desire for predominance in trade. The larger republics of South America are not likely at any time to be subject to any dictation on the part of the United States, whom they are enabled to meet on terms of practical equality in certain essential respects. The influence of the United States politically, upon the turbulent element of Central America, can scarcely be regarded as other than a useful factor.

A useful and active institution, as regards the intercourse

of the North and South American republics, is the Pan-American Union, an organisation of American internationalism, which perhaps has no counterpart elsewhere. The headquarters of the Union are situated at Washington, and it is maintained by all the Latin American republics, from the United States and Cuba in the north to Chile and Argentina in the south, upon a basis of contribution in ratio of population. It maintains an important staff of international experts in commerce, law, economics, trade, and statistics, with compilers, editors, special writers, and investigators, who are engaged in spreading information over both hemispheres, as concern the potentialities and resources of Latin America. The building in Washington is situated near the various American state departments, and represents an investment of £200,000. Publications are made by pamphlets and leaflets describing in detail each one of the Latin American countries, in English, Spanish, Portuguese, and French, and the "Monthly Bulletin" issued by the Union is a publication of considerable economic and geographical value, replete with interesting matter and illustrations. For 1912 more than 1,000,000 pamphlets were issued, and 10,000 letters per month written to all parts of the world, and the contributions for maintenance had increased in five years from £10,000 per annum to £25,000. Due partly to the work of the Union it is, that the trade of the United States with Latin America is increasing in a rapid ratio. In Great Britain there is no institution, remarkable as it may seem, of the nature of the Pan-American Union.

A feature of British investment in Latin America is its persistence even in the face of risk of losses. Notwithstanding that merchants and bondholders have been cheated on numerous occasions, that debts and loans have been frequently repudiated and obligations unfulfilled, British gold is always ready to subscribe for stock and shares in those remote lands. Losses are soon forgotten, especially when salved and offset by rich successes. In some instances, also, British and other foreign bankers and investors are ready to lend money to Latin American states, as to other remote lands, regardless of the morality of the matter. Public

debts have been built up in some Latin American countries under this system, in some cases, which ought not to have been incurred.

The educated Englishman who arrives in Latin America must generally assume the prestige as well as the burden of his empire, for he is among a race of idealists: "La Gran Bretaña" and "Inglaterra" are names of lasting power. That a man is an "Ingles" is to stamp him a being worthy of distinction and favour. The British word has been always the British bond in Latin America: the "palabra de Ingles" has passed into a byword. The Frenchman may command the deserved admiration for art and culture which his country has earned, the German may be the recipient of attention from his faculty of entering into local social life and for his pushing commercial qualities, the Americano from the United States may begin to reflect some prestige from the power and wealth of his great country, but it is for the Englishman the peculiar regard is entertained: the history of his country and the character of whose nation have pervaded the world. The Englishman in Latin America is still to a certain extent a "milord." He comes for great enterprises; his pockets are always overflowing with silver, which he is supposed to dispense liberally. The traits of impartiality and general commercial rectitude of Great Britain have been the cause. Furthermore, Englishmen who travel or reside in Latin American countries are generally men not falling below a certain standard of education, and if not always of independent means, they have come as representatives of wealthy firms, companies, or syndicates. They are managers of branch houses, engineers, travellers, sportsmen, financiers. The lower-class Briton is rarely encountered, as is the case with immigrants from other European and North American countries. There has been no influx of poor class immigrants from Britain. England is the country which in great part has financed railways, and railways in the Latin American countries are things which come far closer to the heart of the dweller than is conceivable in England, France, or Germany. An individual who builds a railway in South America is regarded

as a benefactor. No honour is too great for him. His praises are sung in the Press, he is toasted at public banquets, he is a Napoleon, a world conqueror. He has "united our beloved patria with those bands of steel which carry civilisation in their path," as the sentiment is generally expressed. The German and the Frenchman, on the other hand, are generally engaged in much smaller enterprises, and display a less liberal method of conducting business, and, with the Italians, they make money out of the country rather than bring it in. German hardware stores and other shops, and French haberdashers and tailors are freely encountered in the towns of Mexico and South America, along with Spanish and Italian grocers, restaurant keepers, hotel proprietors—all valuable agents in the growing communities, but of less standing than those foreigners who conduct banks, great wholesale establishments, build railways, open mines, and plant great sugar, cattle, and cotton estates.

The American, or *Norteamericano*, as he is termed in South America—whose people regard themselves as equally entitled to the name American, and so add the qualifying "norte" or "north" to their neighbours of the United States—is enjoying a growing prestige somewhat after the British kind, but which is not likely to reach the same intensity. Indeed, the Americano enjoys often a "reflected glory" from the Ingles, with whom at times he is confounded, due to some similarity of appearance, and of course a common language. The American qualities of energy and the fame of their wondrous achievements in the mechanical world are fully acknowledged, but it is recognised that the Englishman belongs to an older society, that he comes of a race of greater refinement, whilst the character of the American is less fully developed along those lines. There is no vainglory in recording the circumstance: only an historical condition. Such are or have been the conditions attending foreigners and their relations with the Latin American people, although growing changes may tend to banish older traditions and distinctions.

There are some indications of a growth of commercial relations between Japan and Latin America. A Japanese

company obtained a concession for, and has established a business in the fisheries off the Mexican Pacific coast, and it is possible that operations may be extended to Peru and Chile. A syndicate from Tokio is engaged in sending Japanese emigrants to Brazil, where colonies are in process of formation. It is probable that emigration is likely to increase, and the obtaining of an industrial foothold by Japanese in Central and South America is an element to be reckoned with. Such a development would doubtless be regarded by the United States as antagonistic to their general view, which is to conserve America free from an Asiatic element. Statements in 1912 that Japanese had acquired coaling-stations and other possessions on the Mexican coast, were met with acute enquiries in the United States. The growth of nitrate exports from Chile to Japan is an evidence of the desire of that country to benefit by the resources of the New World.

The economic immaturity of Latin America was for many years reflected in the system and conditions of currency; conditions which remain to a large extent among the more backward republics. Argentina has in the past suffered greatly from depreciated currency. In the period of so-called prosperity between 1881 and 1890, bank-notes were issued in great quantities, especially under the Free Banking Law which obtained during that period, which allowed provincial banks to issue notes, borrowing specie abroad for deposit with the national government as security. The country was at that time flooded with hypothecary bonds or cedulas. The government sold the specie and the proceeds were largely squandered. The financial crash which came upon the republic as a result of such operations, was followed by the assumption of responsibility for these foreign loans by the national government, and the establishment of a gold guarantee, which fixed and ensured the value of the paper money at 44 cents, equal to twenty-one pence, for every paper peso or dollar, which it now enjoys. The conversion fund set aside for the redemption amounted in 1908 to £40,000,000. Thus the paper currency forms a large part of the internal debt. The credit of the country has

been established, and the republic regularly effects a large annual amortisation of its public debt. In Brazil fluctuations in the paper currency have caused heavy loss and inconvenience in commercial operations; and as in the case of Argentine funds have been created for purposes of guarantee and redemption. In Colombia the depreciation of paper currency at times reaches ludicrous proportions, a gold dollar occasionally having been the equivalent of 225 paper dollars. In Peru, Ecuador, and Venezuela the gold standard has been adopted and the British pound sterling is legal tender, giving stability to the currency. In Mexico the value of the dollar is also fixed.

Among the future elements which may affect the foreign relations of Latin America, is that of the development of naval armaments. The growth of South American navies has generally been watched from Europe and the United States with unconcern; more recently tinged with a realisation of latent possibilities. In some cases, as with the navies of Argentina, Brazil, and Chile, large sums of money have been spent upon warships; in others the efforts towards naval armament have been merely in the nature of nominal completing of national institutions, and have been represented by more or less nondescript craft. As a race the Latin American people do not possess the particular ability of a sea-faring people. They are neither natural sailors nor expert mechanics—a combination of which callings underlies modern sea-power. They lack the talent of organisation and rigid upkeep of detail which is the life of a navy. When the stimulus of novelty is gone, dilapidation tends to set in. It would almost seem that nature had intended that the Latin American people should be relieved of the burden of naval armaments, which originated among island people, and can never reach the same standard with continental nations, to whom they are not a vital necessity. Sea-power was a growth of Britain, and in its purest form is British, and imitated even by European continental powers, or the United States, is probably but a development which precedes disuse or decay. That so exotic a growth should be expected to flourish in South America cannot be regarded

as natural. The growth of sea-power in Latin America, is the result of inter-republican relations to a greater extent than the necessity for protection against outside menace. In the case of the war of the Pacific, of last century, the possession of a single ironclad turned the whole tide of battle. Yet, once questions of boundary are settled, it is difficult to see what matters of contention need arise between the Latin American republics. The growth of Pan-American ideas tends towards the adjustment of differences pacifically. If the time should come for over-populated European nations to cast envious eyes upon unoccupied territory, then Latin Americans would be called upon to protect their integrity ; and what the future holds in store in this respect it is impossible to forecast. But it is doubtful if, in the event of an organised attack, their naval armaments would be of much benefit to the republics. Pirate nations from Europe would be well armed before attempting such conquest ; and the strength of the Latin American people would be rather in land warfare by guerilla methods, to which those regions lend themselves.

The essentials for a naval efficiency are a sea-faring population and good natural harbours, and the Latin American republics do not generally possess these conditions. Argentina is a land favoured by nature in many respects, but there is no natural harbour or vital centre capable of sheltering the navy, and the republic has no sea-faring population. Buenos Ayres possesses no harbour that could be regarded as a naval centre, except Bahia Blanca, which lies 500 miles away from the capital. The country possesses a very extensive coastline, but nature has provided it with few indentations, such as true maritime nations require for their sea traffic. Brazil is better situated in this respect, with one of the finest harbours in the word, that of Rio de Janeiro, whose bay could maintain a fleet as large as that of Britain. But Brazil has an enormous coastline and no maritime population likely to rank as a defensive element. The gravest difficulty to successful sea-power in Brazil is the lack of discipline and the menace of insubordination A navy which may murder its officers and turn its guns upon

its own capital is of doubtful calibre; and this occurred a few years ago in Brazil, where the Latin American revolutionary spirit was carried to shipboard. On the Pacific side of the South American continent conditions vary. Chile is the most efficient naval power in Latin America. The republic possesses a maritime element in her population sufficient for naval purposes, and has naval traditions of some value, such as are not possessed by her neighbours. The Chilean sailor is a good sea-fighter, and the navy owes much of its spirit to association with Britain. It cannot be said that Chilean seaports are such as to warrant the extensive development of naval power; for throughout the long coastline safe and commodious harbours are few. Peru in the past has been the rival of Chile on the Pacific coast, and in naval matters, and has to her credit some fine episodes and traditions, which redeem her from entire nullity in matters of the sea. It was upon the Pacific coast that the first clash of ironclads occurred; and the fame of their Peruvian and Chilean commanders has gone down to history. But the Peruvians cannot be described as a sea-faring people, or as possessing the stamina or knowledge necessary to maintain a powerful navy. Nor does the country possess harbours which could lead to the development and maintenance of warships. Similar conditions hold good with Ecuador and Colombia to the north. As regards the northern coast of South America, upon the "Mediterranean" of America, neither Colombian or Venezuela have conditions or capabilities requisite for the growth or maintenance of sea power, whether as regards their people or their seaports. Mexico on the Pacific, with the exception of Acapulco, has few good harbours, and on the Caribbean sea Vera Cruz is artificially protected from gales; she is not, moreover, a sea-faring people, and has not developed nor is likely to develop a navy. As regards the five republics of Central America, they are so far a negligible quantity in respect of naval armaments.

CHAPTER XVI

SOCIOLOGY AND FUTURE

The future of the Latin American people, regarded from a sociological and democratic standpoint, has been comparatively little studied. A whole continent and a subcontinent, embracing the larger half of the area of the New World, with a population of nearly 100,000,000 people and practically a single social system, lies waiting, for good or evil, the moulding force of modern life.

The primary reflection aroused in the mind of the impartial student might well be one of astonishment that a region so vast, so abundantly endowed with natural resources, owning illimitable areas of public lands, should shelter a population relatively so poor and backward. The picture presented by Latin America, viewed from its darker side, is that of a community surrounded by inexhaustible natural wealth, but composed of a great bulk of poor and humble people, mainly illiterate, owning practically nothing of the soil upon which they were born, with a handful of a governing class who practically monopolise the wealth and education of the country. The diet of this great poor class is of the most meagre; their dwellings and daily surroundings the most primitive; their dress insufficient to protect them from the climate; their right as citizens ignored in great part. Their governance is in the hands of self-seeking politicians or military despotisms, who have come into power by the misuse of the ballot box and the aid of the sword. They are regarded as mere producers of agricultural wealth for their betters, and as food for powder in political struggles. Their national public works are provided by foreign capital, whose alien shareholders reap the dividends accruing

therefrom. Their only means of building a railway, or opening a bank or a mine, is by appealing to the moneyed class of foreign countries and to the cosmopolitan financier. They live in a country where nature has provided a mine for every inhabitant, a farm for every peasant, but their mines and lands are owned by domestic or foreign capitalists. These, in their extreme, are the conditions sociologically.

This sombre picture is not the one generally regarded. To glance at the presentation of national conditions in the presidential messages and statistics of the Latin American republics, and to mark the allusions to growing imports and exports, and observe the array of illustrations of public buildings and pretentious monuments published on every possible occasion, is to imagine some splendid Utopia, set down in a region of perpetual spring, ministered to by correct, if swarthy, gentlemen in top-hats and frock-coats, where prosperity and civilisation follow as a natural course. The dark background does not at first sight show through. The hordes of serfs in farm and mine, the struggling poor of the sub-tropical slums, the beggarly Indians and half-breeds, and the whole great army of poverty in general is not in evidence. The unthinking foreigner notes the electric lights, the stucco buildings, the palms, music, the bewitching maids and matrons of a leisured class, and other constituents of the general atmosphere of "Viva!" which surrounds the Latin American world. The student of sociology might turn away from this picture and pronounce it all hollow and evanescent, did he not know that it differs only in degree and not in kind from the social conditions of his own country, be he a native of even the most advanced European nation.

Two paths lie before the Latin American communities, whose selection might almost be termed the lesser of two evils. On the one hand is the invasion of the foreign capitalist, engineer, and trader, which in its way is a power for civilisation and a relief from the stagnation of social customs which is so marked a feature of Latin American life, and an antidote to local jealousies and fierce party strife; matters

from which almost any escape seems desirable to those condemned to experience them. On the other, these agents are the forerunners of the system of industrial exploitation and commercialisation of the working classes, which dominates the advanced European nations and the United States. In the United States the masses of the people are just learning that they have been and are being largely cheated out of their inheritance ; that they have the form of democratic government, but are really ruled by concentrated wealth and the politicians who serve it. In Britain the people are leading the civilised world in demanding their inheritance of the land and an equitable adjustment of the national resources, by a series of revolutions without bloodshed. Is it to be peaceful stagnation, in a land where nature almost spontaneously provides food, but broken by the minor alarms of warring politicians, or is it to be the strike, the lock-out, the industrial " slum," and the war between capital and labour ? Latin America has to judge between the two systems, and judgment is not easy. The civilised world has yet to remodel its ways after centuries of experiment and social evolution. Is it to be expected that the Latin American communities could enter on a better phase of life without necessarily going through the same experiences ? The situation admits of discussion. Society has found that the despotism of capitalism is almost as bad a form of despotism as any other : but it is also known now that it is equally a passing form of despotism. The particular form of domination is not yet ineradically rooted in Latin America. Enormous areas of territory belong to the state. The bulk of the population is still plastic, capable of being moulded upon new lines, and open to new influences. The handing over of great areas of national land to capitalists and concessionaires, and to private ownership in other forms, can readily be curtailed. Probably the over-monopoly of land, or at least of land in large quantities, is doomed in every advanced country. Latin America can avoid now the bitter legislation and the matters of compensation or confiscation that later on would be necessary to recover the land for the community, such as will be inevitable processes in

all countries unless a greater measure of social justice and logical organisation of life can be brought about. (Russia is a dreadful example.) The Latin American republics, by taking thought, can now assure the " unearned increment " of the land to present and future generations. The too ready handing over of national assets to foreign and domestic concessionaires and companies, under the plea of development, and the establishing of monopoly ownership of land in perpetuity, wisdom will advise must be curbed. It is better to make haste slowly. Capital will always seek investment, whatever the conditions imposed, if the conditions are nationally wise and philosophically just. Capital cannot be hoarded or withheld. The exponents of mere capitalism may urge that the development of the remoter parts of the earth's surface cannot be brought about unless capital is allowed to work its will and reap an untrammelled reward, but if so they are mistaken, and events are showing that a more righteous system of commercialism is not likely to be less profitable than was the capitalism run riot, which is now under surveillance all over the world. Up to very recent time capital has been practically blind with regard to the real possibilities of labour. It has exploited without nourishing it. It might have been supposed—even on the principle of feeding and stabling a horse to obtain its best powers—that capital would have nourished and fostered labour, but, remarkable as it is, this primitive economic principle has scarcely been recognised, and very little in Latin America.

It is to be recollected that the growth of democracy in Latin America may bring changes that will profoundly affect the foreign, as well as the domestic, capitalist. Democratic legislation is already at work, especially in the River Plate republics. The taxation of the " unearned increment " on land has recently been made the subject of a Bill before the Congress of Argentina. Some of the large landed properties are more than 100 squares leagues in area. Mexico has nationalised her railways and may bring about changes in mine ownership ; Uruguay is already far advanced in sentiments concerning nationalisation of resources.

In the past, innumerable concessions have been handed over to the foreign concessionaire by the governments of these republics, who were often glad to obtain money and assistance at any price. But a growing democracy may protest that it had no hand in these bargains, and proclaim that it cannot abide by them; that the increment from its docks, railways, plantations, mines, and public works must belong to the community and not go to form dividends for foreign shareholders. The growth of the democratic spirit is likely to be sudden in Latin America when it once gathers headway. The people have not the stolidity and patience of the British or the European, and not the all-subordinating business instinct of the North American. Their ideas of property and of the sacredness of commercial contracts are far more elastic than those of older nations, and from protest to confiscation might be a relatively facile step. The foreign director and shareholder of Latin American companies would be well advised to study the reasonable amelioration of life of the brown employees who produce his dividends.

For the Latin American countries have not been able in the past to dispense with the aid of foreign capital, and certainly cannot do so yet. The harbours in many instances would still be unserviceable, or death-beds of yellow fever, and South America and Mexico would be without railways had not the aid of foreign capital been invited; and the stagnation of centuries would scarcely have been penetrated had national efforts alone endeavoured to work their way. Foreign capital, moreover, is neither better nor worse than home capital. One of the first evidences of development in any Latin American country is the creation of a native plutocracy, with all the vices of its class. The worship of money, the deference paid to the large landholder and millionaire, the luxury, selfishness, and corruption of the wealthy is perhaps more marked in Latin America—as in the United States—than in Europe. The name "republic" itself is a mere convenience. There is at present no such thing. The "res publica," the public things, are not public. They are the monopoly of those in power. The new world has not yet produced anything of material

superiority over the old, for democracy, following upon its pronouncement of an idea. Democracy as represented by the American republics in general, has, so far, brought results which have fallen much below that condition for which the sociologist might have hoped. The twin-continents of America, unstained by history, might seem to have offered a virgin field; a step forward in civilisation for the world. But it was not so. The American peoples have reproduced and even exaggerated the evils of the Old World, with small exception; and the disinterested observer will in this connection be under no illusion concerning them. A survey of Latin America shews the condition of the Old World being repeated. With the growth of wealth, as in Buenos Ayres and other capitals, comes the growth of pleasure, of horse-racing, gambling, and of deeper vices. The contrast between rich and poor is accentuated by the caste of clothes—the Parisian attire of the rich and the native garb of the poor; and the holding of the land by large landowners acts against the settlement and close cultivation of this. The Peruvians were ruined by guano; they became corrupt and pusillanimous by the too easily acquired wealth of the upper class; and their neighbours, the Chileans, if they are ruined by pleasure and corruption, will be so ruined by the easy wealth of the nitrate fields. The Argentinos will fall by wheat and meat, the Brazilians by coffee and rubber. The possession of single sources of great wealth, of an assiduous monoculture of any kind, has the danger that it may spell ruin in the end, because it is grasped by the few, the bulk of the nation remains poor and ignorant and tends simply to form the "cheap and abundant labour" of the financier and his projects or prospectuses.

The Latin American people are accustomed to look towards their great neighbour of the United States, with something of admiration for the enormous material development of that country, and for the rapid increase of population that has followed upon immigration. But they are not generally aware of the drawbacks attending this rapid development, and would be well advised to study the conditions which

have produced it, and to sift and regulate them when applied to their own case. In the expansion of the United States, great centres of industry have been created by a system which has expended unbounded energy and ability in producing wealth, but comparatively little in creating happiness and nobility. The poorest emigrants from Europe have crowded in and have been used as human fuel in the furnaces of wealth-production for a plutocratic class, whom they are now beginning to blame as the authors of much misery, and already volcanic streams have begun to flow from labour in the attempt to adjust its burden. Strikes, with gatling-guns and dynamite for arguments, have been the outcome, and there is no cure for the malignant fever except Providence and the growth of a nobler human spirit. The American people have now awakened to the danger, and are seeking to curb the entrance of the great stream of illiterate labour from Europe. The Latin American governing class, as soon as they are able to think rationally—and many of them are—should consider the position of the world, or rather of the industrial nations whom they strive to copy. At the present time the industrial nations—the United States, Britain, Germany, France, and others—are rapidly being divided into two opposing camps, one of which comprises the rich employing class, directing labour and amassing profits therefrom, and more or less blind to any methods save profit; and the other the mass of toilers who are obliged to sell their labour for wages, and as a rule are unable to approach a civilised standard of life upon that wage. This is the condition of life among the world's most advanced communities in the twentieth century. The Latin American people, still plastic and semi-barbarous, should ask themselves if they cannot reach their goal without falling into the same pit. It might well be argued, especially in the growing light of knowledge about industrialism, that the lack of great or exclusive manufacturing centres in Latin America, rather than being a misfortune, is an advantage in disguise. The mind of civilisation has been obsessed with cities and with factories. It will have to unlearn. To grind the face of a working class in order to export overseas vast quantities

of made merchandise is not necessarily civilisation. A rural civilisation is now the growing need of the great industrial nations. Latin America has been spared the phase of machine-minders, working among wheels and steam all day and crowding to their unlovely homes at night. It behoves the rulers of Latin America—if the spirit is within them—to encourage the cottage industry, to discourage the factory; to keep open the land, to forbid the "slum." The simple arts and occupations of the natives, especially those who lived under the old pre-Hispanic civilisation, have within them the basis of sufficiency and the simple life. Why foist upon them the industrial customs of other lands, which have now been weighed in the balance and found wanting? Humanity, not commercialism, is the next phase of the world's progress. The upland Indian of the Andes, with his little *chacara* or farm and his hand-loom, growing his maize and making his garments, assisted in both by his woman, is happier than the Lancashire factory hand, with neither air nor space to call his own. Regeneration lies within for the Latin American people, not from without, and foreign gold will not in the long run prove a substitute for self-reliance and homely energy. A spirit of kindly and intelligent co-operation could till their fields, dig their irrigation channels, and build their roads, were it awakened and fostered. The homely communities already established can become largely self-supplying. There are possibilities about these remote Spanish-American towns and villages—possibilities which wait, however, upon that period of sane industry-planning to which the world looks forward. They are not possibilities for great industrial undertakings, such as tear a land to pieces for the benefit of shareholders, and whose operations at present are confounded with "progress," but possibilities of a quiet life under the system of interdependence of town and country, such as will have to underlie social life in the future. They are not and never will be manufacturing towns, except in the sense of supplying the needs of their own inhabitants. Nor are they likely ever to grow to unwieldy size, with consequent congestion and attendant problems. There is an air of

tranquillity about them which is due to the absence of the commercial element, and this is undoubtedly an asset which it would be wise to foster, whenever a real community-spirit may awaken in Latin America, as in any other country: a constructive righteousness regarding the enjoyment of the fruits of the earth. These lands so lavishly endowed by nature could become self-supporting and self-dependent. In the respect of natural resources they are peculiarly well situated. In almost every state, from Mexico to Argentina, as has been set forth in these pages, all the necessaries of life lie ready to hand. Wheat and meat, fuel and stimulants, clothing and building material, metals for industries, and gold and silver for currency require only to be dug from the hills and fields. These states possess within their borders all the elements of self-supporting communities. They might lead independent existences, based upon the complete sets of commodities with which nature has furnished them. They have not to struggle against the winters of northern lands, where the soil is locked up for half the year. Their climate is so benignant that several crops a year may be reaped with a minimum of effort. Vested interests, so far, have only monopolised a portion of the national resources. They possess full knowledge sufficient for progress. Among their educated classes are engineers, lawyers, and physicians. Doctors of scientific and all other laws are more numerous in proportion to the inhabitants of Latin America, perhaps, than in any other country of the world. All wealth in the first instance comes from the soil, plus labour and knowledge, and their political economists ought to be as well aware of this as the most advanced of Europe.

Despite these advantages, co-operative life, such as that towards which the world is tending, does not shew any particular sign of coming to being in Latin America. The cry is always for European capital to develop their resources; the *libra esterlina*—the foreign pound sterling—is regarded as their salvation. In the interior of the continents there are no roads worthy of the name. The wretched mule tracks over which pack-trains and horsemen have stumbled for

centuries, scarcely receive any attention, but are left in an almost impassable condition pending the advent of railways built with foreign capital. Yet roads can be constructed with resources procurable on the spot, and good roads are a greater indication of civilisation than railways. If the idle and selfish inhabitants did but arouse themselves they could build their own roads, instead of which they are often content to vegetate in remote towns, priest-ridden, and class-ridden, paying enormous prices for the carriage of goods, and rarely venturing into the outside world. Industries on a co-operative basis are unheard of. The Latin American people are not an inventive or mechanical race: nor is this necessarily their fault. They cannot manufacture of their own initiative the intricate machinery requisite for modern industries. There is not a locomotive produced in the whole length and breadth of Latin America. They have mountains of iron and copper ores, but cannot roll a steel rail or make a copper tube. But the knowledge is available and the power obtainable, without necessarily handing over all the benefits accruing therefrom to domestic or foreign control. They must develop home industry.

The greatest problem for the Spanish American countries is the upraising of their working classes. Of middle class as understood in Britain there is little. The masses consist mainly in the huge bulk of agricultural and mining labour, formed of various shades of the Ibero-Indian race. They are exemplified in the 15,000,000 of Mexican peons, the 2,000,000 or 3,000,000 of the Peruvian Cholos, and their counterparts in Ecuador, Bolivia, Colombia, and Venezuela; the Chilean *rotos*, and the workers on the *fazendas* of Brazil and the *estancias* of Argentina. How are these people to be upraised? The proportion of those who can read and write is very small. In Mexico, as shewn elsewhere, it is about 15 per cent., in Brazil 20 per cent., in Peru and kindred countries it is still lower. It rises in the Argentine republic to about 50 per cent. of the population. As only those who can read and write may vote, it follows that the great bulk of the citizens are disfranchised, and the upper element work their will in the governance of the land and the disposal

of its resources. The reply is partly in increased education, but by no means wholly. Education, whilst it awakens the power of a democracy to a sense of its rights, must be accompanied by industrial reform. The conditions hold good in whatever land, and are being brought forcibly to public notice in the most advanced communities, such as Great Britain and the United States. The power of a people to help itself and to throw off the oppressions of an upper class is in proportion to the stage of its education. But a wise ruling class in Spanish America might, profiting by the lessons of more advanced communities, endeavour to bring about an equitable adjustment of industrial conditions simultaneously with an educational advance: so avoiding the inevitable conflict between capital and labour which education of the masses brings. Whether they will do so is outside the range of prediction, but lessons of events in Britain and the United States may force these morals upon more backward nations. The Latin American republics are essentially agricultural communities, and the soil is their main source of wealth. They should beware of building up the ill-balanced conditions of town and country from which other nations suffer. At present they possess no acute problem brought about by the desertion of the land for the city. They are not manufacturing nations, depending upon export trade of articles made in factories, and suffering from the presence of industrial "slums" and a deserted countryside consequent upon the system. Their statesmen and statisticians often deplore the lack of manufacturing industries, but it is doubtful if advantages would be gained by endeavouring to convert the people into a manufacturing community on a large scale: the Latin American labourer is by nature a land-worker, and only with difficulty does he exchange his outdoor occupation for the restricted life of the factory. True wisdom, it may be repeated, should encourage cottage industries, rather than endeavour to build up industrial centres. These communities are composed of people whose wants are extremely simple, which can mainly be covered by the products of the country well within their reach, both from the soil and from their more

or less easily wrought manufactures. To endeavour to create a demand for the numerous and varied articles, such as the European and North American people even of the poor class require, and to induce them to strive to purchase such articles would be a doubtful service. The development of their life lies not in the creating of populous cities and a more or less artificial condition of life, calling for multitudinous articles of food, furniture, apparel, often of a kind meretricious and unnecessary, but in a hardy self-supporting people, freed from their present miserable surroundings, and of a rural rather than an urban standing of intelligence. Much of the work of the civilisation of European countries will have to be altered, and this process might be avoided in Latin America. In the districts in Latin America where industrial activities have become more pronounced, socialism and even anarchy are beginning to flourish. The somewhat rampant wealth of Buenos Ayres has produced its inevitable scourge of a growth of an anarchistic element in the city. In the great seaports of Brazil, Argentina, and in a lesser degree on the Pacific coast, dock strikes are becoming frequent; the nitrate workers of Chile have long been addicted to strike, and the mechanics and artisans in Mexico similarly assert their ideas. The more intelligent workers generally are alive to the great contrast between their own condition and that of the wealthy classes, and the dockers have generally grave causes of complaint. The recent coal and dock strikes in Great Britain caused a deep impression in Latin America. If, they argue, Great Britain, which has always been considered the home of prosperity and justice, contains such causes for complaint, what must be the truth as concerns our own soil?

The conditions of primary agricultural and pastoral industries in Latin America cannot be regarded as altogether sound. Certain natural and economic drawbacks and risks attend food-bearing territories where one kind of product is cultivated. The fact that enormous areas of land under wheat, or devoted to cattle-raising or other single products, are exposed to danger of loss or deterioration, gravely affects matters of population and progress.

Argentina and Brazil are specially subject to the effect of this condition. Vast interests, moreover, intended primarily to benefit their owners and to provide for foreign consumers, if carried on to the exclusion of the people of the soil, cannot be regarded as natural. The first tax upon a land must be for the benefit of the people who dwell upon it. If they are in any way starved or limited in order to swell exports and dividends, the future will assuredly take toll of the condition. Thus the breaking up of vast estates, and the inauguration of a more varied and extensive system of cultivation, to a sufficient extent for by the well-being of the population, will be a necessary condition of advancement in the Latin American republics.

It behoves the Latin American republics to guard their land with care. In many of the South American states enormous areas of public lands exist, in some cases uninhabited and unexplored. "Our inexhaustible wealth of natural resources" is a favourite term in dealing with this virgin territory, by national writers and economists, but their resources are not inexhaustible. The remarkable settlement of the United States, and later of Canada, shews how rapidly such lands fill up. The tide of expansion will shortly reach its limit in those lands and set towards the unoccupied spaces of Latin America. At present the governments of these republics are almost flinging away their lands. Any concessionaire who undertakes to build a railway or a road, is offered thousands of acres for every mile of line constructed. Enormous areas of land are "sold" at merely nominal prices. The territories in the heart of South America, such as those of Western Argentina and Brazil, and Eastern Peru and Bolivia, Colombia and Venezuela, enormous plains of cattle-rearing and wheat, cotton and maize-growing possibilities, are of a potential value such as cannot be calculated, and to hand them over to foreign concessionaires at a few shillings an acre—their "market" price at present—is an error of economy for which time will bring its punishment. Apart from the land, the sociological problems in the numerous states which have here been considered as a homogeneous unit, are complex

and difficult: but the future will shew that one guiding principle must be brought to bear upon these, as upon the economic conditions of all nations: that of the systematic and scientific organisation of the national resources in the interests of the people collectively.

It is impossible yet to regard the Latin American nations as permanently at peace. Mexico started from a long period of quiescence under a military dictator to murderous energy in revolution. At the other extremity of the Latin American world is Uruguay, whose fires of revolution are only banked. Brazil and Argentina, rich with great exports and plutocratic wealth, have no guarantee against sudden internal war. Among the lesser states, Ecuador and Peru have recently outraged their own elected presidents, and in the case of the former ruthlessly murdered its ministers. The least important republics are at times the most turbulent. Irresponsible and illiterate presidents, as in Nicaragua and Venezuela, have killed their own countrymen and flouted the whole civilised world. Yet there is no real reason why the Latin American republics should not be at peace. They enjoy many territorial advantages. Their people are not like those of European nations, often oppressed by the presence of more powerful and rapacious people. There is little need for great standing armies. Their wars are from within, not without. No one seeks to encroach upon their territory, and they are free to work out their own destiny. Furthermore, they have no vast barbaric areas of people to redeem. There are, it is true, great unexploited and even untravelled areas, but there is no Tartary, no Mongolia, no inert mass of Chinese on their continent to outweigh progress; no Russian, Prussian, or Turk to snatch their territory from them and murder their nationality; and consequently no Poland nor Balkan states. In no part of Latin America, notwithstanding its vast areas, is there any portion of the territory more than a thousand miles from the sea—the highways of the Atlantic and the Pacific oceans; and generally the maximum distances from the seaboard are less than half that.

The unification or federation of the Central and South American republics, or grouping politically of such respectively,

is a subject which has long occupied the attention of students of Latin American affairs. At the present time, whilst there exists a growing solidarity of opinion on matters affecting their race and common foreign relations, among the Latin American communities, it cannot be said that any tendency towards federation is apparent. The seats of government of the various states are far apart, separated by great tracts of savage territory in most cases, often unconnected by railway. Each republic jealously preserves its isolation and independence. To the foreigner, the difference between a person of Peruvian, Ecuadorian, Mexican or Colombian nationality, for example, would scarcely be apparent, yet pride of nationality is exceedingly strong with each. There are arguments both for and against the possibility of combining South America under one federal control, such as forms the administrative basis of the United States or Canada. It may be that the existing system tends towards more rapid development. Separate governments provide a multiplication of opportunity for administrative posts and a greater incentive to action. In Latin American society the large number of ex-ministers or other high employees, who have served the state under former administrations, and who may serve it again, is notable: this has both its advantages and defects. It is more important for an undeveloped community to have its own social and governmental centre focussed in its midst, rather than to be governed from some remote capital, by an administration out of touch with them. The growth of the community-spirit, and the consummation of home rule, judiciously associated with a corrective paramount head, is the natural and growing tendency of government throughout the world. The intensifying rather than the annihilating of local pride is the element which will lead to the greatest extraction of the benefits of the soil for its inhabitants. South America cannot be regarded as a land of petty states, such as Italy or Germany were before unification; the areas of territory covered being so vast. On the other hand certain benefits might accrue from federation. Brazil and Peru, or Argentina and Chile, under a system of common

political and commercial interests, would embrace the continent from sea to sea, with possibilities of transcontinental railways building, trade development and settlement resulting therefrom. Between Peru and Brazil, however, there is the barrier of different language. With communities so widely scattered, federation, it might be argued, would ensure greater security from outside aggression; but arguments might equally be advanced to prove it a source of weakness, especially in the event of outside attack by sea. Under any circumstances, economic considerations are of less weight among the Latin American peoples than political and personal ones. As regards the Central American group, the former union, or proposals for such, of those states, were dissolved in bloodshed, and their political conditions are too disturbed to permit any forecast of their future. In general terms the system of separate republics may be said to preserve the attractive individuality of the Latin American States. The names of Brazil, Peru, Chile, Argentina, Mexico or other, strike a note of interest which is not conveyed by the mere conglomeration of provinces, such as those of the United States and Canadian West: and to sink their picturesque nationalities in a general union is not likely to appeal to the Latin American states. The growth of Pan-Americanism, and the Pan-American conferences which have their regular sessions in the various capitals alternately, make for good feeling internationally among the numerous American republics, but scarcely for federation, or not at present. What the future holds in this connection it would be useless to endeavour to forecast.

The projected Pan-American railway, like the Panama canal, when the line may become a reality, is generally regarded as capable of important influence for the future. In order to connect the existing railways systems of Mexico and South America it is estimated that the construction of 5,000 miles of line is required. The project possesses no elements of insuperable difficulty. Far more extensive railway systems have been built in other parts of the world; and the commercial results to be expected are sufficient to warrant the expenditure of the necessary

capital. The Pan-American railway, giving through communication from New York, and all other cities of North America to Buenos Aires, Lima, Valparaiso, and the South American capitals generally, is one of the great railway projects remaining to be accomplished, and is a matter of extreme interest, which doubtless will not long remain unfulfilled. International communication thus established would tend, it is reasonable to suppose, towards improved relations between the numerous South and North American republics, and a better understanding of each other's life and ideals.

It cannot be said that Latin America has produced, so far, any great features of civilisation, or anything new for the world. The Greeks, the Phœnicians, the Romans, the British, have no counterpart in the great continent and sub-continent of Latin America. A sameness characterises the whole Spanish and Portuguese-speaking new world, and nothing remarkable has proceeded out of it. The nearest approach to the classic nations of the Old World, in the New, were those peoples who flourished before Colombus sailed—the Incas and the Aztecs, and their predecessors and contemporaries. The splendid past of Central America and Peru had its classic temples and laws, which sprang from its soil; and a civilisation which might have developed into a system valuable for the world. The present is a time of transition. In considering the future of Latin America the question consistently presents itself: How is the race to be considered: at what point of its development is it? Has it inevitably to pass through a selfish and intensive industrial exploitation, such as the European people have passed? Is it inevitable that an intelligent and Europeanised people must pass through the industrial phase before any form of social equilibrium can be secured, or is there any other way? It is difficult to reply. As has been shewn, there is not of Latin American art a locomotive or steam engine produced throughout the length and breadth of Latin America. The French are a Latin people, but the French were also original and initiative engineers. The Spaniards were not engineers, but they conquered other realms. The Italians

are also Latins, and they conquered the realm of art. But what realms can the Latin American conquer? They are not mighty shopkeepers like the British. Clearly they cannot conquer either mechanical science, or art, or literature. In those fields they could not be more than copyists: and they have not attempted even that, perhaps wisely. Thus they cannot vie with Britain, the United States, France, Spain, or Italy. They cannot emulate the Canadians or the Japanese in their special fields of advancement. The Australians have evolved a special type of democracy, but the Latin Americans cannot copy that. What is their special mission then? It might conceivably be in bringing to being a newer type of economic life. The world has never possessed a social system in which one class did not live in wealth and intelligence with another in poverty and ignorance. Latin America has the condition, as regards native resources, which might produce a society more or less in equilibrium, without imagining an impossible Utopia. The future of the Latin race rests to a large extent with Latin America, and it remains to be seen how this particular type of American civilization will advance.

It is seen, from what has been set forth in these pages, that the Latin American people and lands are, in general, still at the commencement of their economic and industrial development. The opportunities for outside agencies in both fields are such perhaps as no other part of the world offers. The Latin American people are extremely susceptible to foreign influence, and readily absorb whatever is good, as well as what is evil therefrom. The opinion of Europe and the United States is sought and quoted as in no other country. In no other continent dwells a people so plastic and sensitive, or so recipient of the sayings and doings of the monitor nations of the world. The theories of progress find an intelligent acceptance among the thinking class, which is not less receptive than the corresponding classes in Europe or the United States; and could they but bring such theories to practical fruition their claim to a high civilisation would be established. They are not people set in their ways, or arrogant, stolid, selfish, or stupid, but are grateful and

eager, and the man with any Spanish blood in his veins, even in the most remote regions, welcomes the traveller and the newspaper, and looks to the future. They have established the most excellent administrative principles and institutions which in time should be carried into practice.

The study of the great region of Latin America, which has been undertaken in these pages, reminds the student of world affairs once more, how great are the resources of the undeveloped lands of the globe, how much remains to be done in their adaptation to the human element, and how considerable will be the scope of society under the more noble and scientific development which it is legitimate to expect of the future. The Latin American republics are still young, and, despite the adverse elements which have to be overcome, are full of promise; and it cannot be doubted that the extensive portion of the New World covered thereby will approach the period of development which, sooner or later, is the fortune of every land. What form this development will take and what benefits will accrue from it will depend upon the present reading of political and economic world-history by those who control the destinies of these interesting and fruitful lands, and the way in which they discern the signs of the times.

THE END

SOUTH AMERICA

English Miles
0 50 100 200 300 400 500
Railways
" in construction
Heights in English Feet
Steamer Route distances in Nautical Miles

CENTRAL AMERICA
CARIBBEAN SEA
PANAMA
Panama
Colon
Cartagena
Valencia
Barquisimeto
CARACAS
Calabozo
Trujillo
S Fernando
Ciudad Bolivar
R. Orinoco
Trinidad (Br)
Tobago (Br)
Barbados (Br)
Martinique (Fr)
Lucia (Br)
St Vincent (Br)
Grenada (Br)
Curacao (Dut)
La Guaira
Puerto Cabello
St Christopher (Br)
Montserrat (Br)
Barbuda (Br)
Antigua (Br)
Guadeloupe (Fr)
VENEZUELA
GEORGETOWN
PARAMARIBO
CAYENNE
BRITISH GUIANA
DUTCH GUIANA
FRENCH GUIANA
Medellin
Tolima 18304
BOGOTA
Sogamoso
R. Meta
Atures
Maracay
Caroni
Mt Roraima 8528
Cocos
Malpelo
Buenaventura
Palmira
Neiva
Zapuara
Esmeralda
COLOMBIA
Tumaco
Popayan
Limon
Pasto
Guyumbe 13,255
Concepcion
C. San Francisco
Galapagos Is (Ecuador)
QUITO
Cotopaxi 19,613
Chimborazo 20702
Guayaquil
ECUADOR
Sangay 17459
G. of Guayaquil
Cuenca
Loja
Parina Pt
Payta
Aguja Pt
Jaen
Chiclayo
Cajamarca
Pacasmayo
Trujillo
Chimbote
Huaraz
Huanuco
Cerro de Pasco
Callao
LIMA
Huancavelica
Chincha
Pisco
Ica
Cuzco
Reyes
Titicaca 12640
Sorata 21,485
Illimani 21100
C. S. Juan
Atico
Arequipa
Mollendo
670 Miles
LA PAZ
BOLIVIA
Buenavista
S Jose
Oruro
Poopo
SUCRE
Arica
Sahama 21050
Iquique
Potosi
Tupiza
Uyuni
Tocopilla
Tropic of Capricorn
Antofagasta
Taltal
Chanaral
Caldera
Copiapo
Huasco
La Serena
Coquimbo
Tinogasta
Guandacol
Jachal
San Juan
Aconcagua 23075
VALPARAISO
Mendoza
SANTIAGO
S Rafael
Maipo Vol 17426
Juan Fernandez Is (Chile)
Vichuquen
Talca
Concepcion
Chillan
Lebu
Valdivia
Corral
Apto Montt
Chiloe Is
S Pedro
Corcovado Vol 7545
Chonos Archipel
Taitao Penin
G. of Penas
Wellington
Wellington to Buenos Aires 6109, Montevideo 6039 Miles
S. Felix (Chile)
S. Ambrose (Chile)
Ter in dispute
Humahuaca
Jujuy 6448
Hullallaco 22000
Copiapo Vol 19916
Monteros
Tucuman
Catamarca
Santa Fe
Cordoba
Rosario
Pesistencia
Corrientes
ASUNCION
Formosa
Villa Rica
PARAGUAY
R. Pilcomayo
R. Paraguay
Concepcion
Miranda
Villa Nioac
Coxim
Santiago
Corumba
Ledesma
Orani
Salta
Tarija
Oran
Encarnacion
Cruz Alta
Passo Fundo
Lages
Rivera
Salto
Paysandu
Parana
Rio Grande
Patos Lagoon
Porto Alegre
URUGUAY
MONTEVIDEO
BUENOS AIRES
La Plata
Rio de la Plata
Buenos Aires to Cape Town 6300 Miles
Buenos Aires to London 6298 Miles
C. Corrientes
Bahia Blanca
R. Colorado
Patagones
G. of San Matias
Valdez Peninsula
Rawson
Chubut
C. Dos Bahias
G. of St George
C. Three Points
R. Desire
Lake Buenos Aires
Neuquen
R. Negro
Sta Cruz
Falkland Is (Br)
Port Stanley
C. Virgenes
Str of Magellan
Sta Arenas
Tierra del Fuego
Hostery
C. Horn
Lennox I.
Nueva I.
Picton I.
Wollaston Is
Hermite Is
Barnevelt Is
Deception I.
Desolation I.
Santa Ines I.
Clarence I.
Brunswick Pen.
Patagonia
Andes
Ter in dispute
S. Felix (Chile)
S. Ambrose (Chile)
Juan Fernandez Is (Chile)
Galapagos Is (Ecuador)
Tropic of Capricorn
Equator
Panama to Callao 1375 Miles
Callao to Valparaiso 1365 Miles
Valparaiso to Panama 3295 Miles
Valparaiso to Liverpool 7777 Miles
Georgetown to London 4700 Miles
Pernambuco to New York 3200 Miles
Rio de Janeiro to Liverpool 5130 Miles
Rio de Janeiro to London 5268 Miles
Buenos Aires to Liverpool 6120 Miles
Buenos Aires to London 6298 Miles
Trinidad (Brazil)
Fernando Noronha (Brazil)
St Helena I. (Br)
Ascension I. (Br)
Gough I. (Br)
South Georgia I. (Br)
Tristan da Cunha (Br)
Mouths of the Amazon
R. Amazon
R. Madeira
R. Purus
R. Javary
R. Jurua
R. Tapajoz
R. Xingu
R. Tocantins
R. Araguaya
R. Paraguay
R. Parana
R. Uruguay
R. Branco
R. Negro
R. Para
R. Parnahyba
R. S. Francisco
R. Grande
R. Jequitinhonha
R. Doce
R. Pardo
R. Mucury
R. Paraiba
R. Itabapoana
R. Itapemirim
R. Itapicuru
R. Vaza Barris
R. Real
R. Piauhy
R. Gurupy
R. Maranhao
R. Mearim
R. Itapecuru
R. Turiassu
R. Acaray
R. Iguassu
R. Ivahy
R. Negro
R. Colorado
R. Chico
R. Gallegos
R. Santa Cruz
R. Coig
R. Desaguadero
R. Pilcomayo
R. Bermejo
R. Salado
R. Dulce
R. Tercero
R. Quarto
R. Carcarana
R. Tunuyan
R. Diamante
R. Atuel
R. Chadileuvu
R. Colorado
R. Negro
R. Chubut
R. Deseado
R. Gallegos
R. Santa Cruz
R. Coig
R. Desaguadero
R. Pilcomayo
R. Bermejo
R. Salado
R. Dulce
R. Tercero
R. Quarto
R. Carcarana
R. Tunuyan
R. Diamante
R. Atuel
R. Chadileuvu
Manaos
Parintins
Obidos
Santarem
Cametá
PARA (Belem)
Breves
Macapa
Erale
Amapa
C. do Norte
Barcellos
Thomar
Ayrão
Yapura
Peguas
Pebas
Iquitos
Nauta
Teffe
Coary
Borba
Itacoatiara
Canotóma
Carapichi
Taguatzinho
Bacabal
Puerto Acre
S. Antonio
São Francisco
Villa Bella
Riberalta
Beira
S Maria Magdalena
Baures
Trinidad
Matto Grosso
Diamantino
Cuyabá
Plat. of Matto Grosso
Gpyaz
Leopoldina
S Cruz
Paracatu
Catalão
Uberaba
Coxim
Sta Anna
Miranda
Villa Nioac
Lencoes
Caldas
Itatiaya 8895
S. PAULO
Castro
Santos
Iguape
Cananea
Paranagua
São Francisco
Rio Negro
Blumenau
Sta Catharina I.
C. Sta Martha
C. de Domingo das Torres
RIO DE JANEIRO
Victoria
Ouro Preto
Leopoldina
C. S. Thome
Campos
C. Frio
Diamantina
Bello Horizonte
São Matheus
Caravellas
Porto Seguro
Belmonte
Minas Novas
S. Romão
Januaria
Pirapora
Carinhanha
Contas
BAHIA (S Salvador)
Cachoeira
S. Joao
Palma
S. Felix
Barra
Aracaju
Queimadas
Joaseiro
Porto Imperial
Remanso
S. Raymundo
Carolina
Therezina
Imperatriz
São João do Araguaya
Chapada
Telha
Assuc
Sobral
Viana
Alcantara
Cametá
Parnahyba
Ceara
Aracaty
C. São Roque
Natal
Parahyba
R. Branco
PERNAMBUCO (Recife)
Maceio
Fernando Noronha (Brazil)
S. Felix
Deiras
Cabrobo
Oeiras
Pernahyba
Tabatinga
Iquitos
Nauta
Pebas
Peguas
Yapura
Barcellos
Thomar
Ayrão
Manaos
Parintins
Obidos
Santarem
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Buenos Aires to Liverpool 6120 Miles
Buenos Aires to London 6298 Miles
Buenos Aires to Cape Town 6300 Miles
Wellington to Buenos Aires 6109, Montevideo 6039 Miles
110 100 90 80 70 60 50 40 30 20 10
Long West of Greenwich

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PRINTED BY THE TEMPLE PRESS AT LETCHWORTH IN GREAT BRITAIN